The CONSTRUCTOR

Volume XXXIII APRIL 1951 Number 4



Speed Trucks in "Stop and Go" Traffic

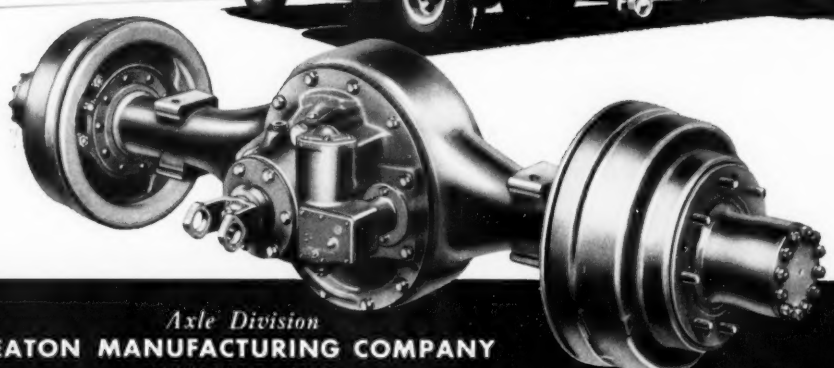
The steady increase in traffic volume is of growing concern to truck operators. Unless trucks can keep pace with the flow of cars, schedules are slowed down and operating costs rise expensively.

Eaton 2-Speed Axles help truck owners solve this problem. Their vehicles have twice the conventional number of gear ratios. That means they can use a "low" gear for quick pick-up under full load. It means easier maneuvering in tight spots. It means climbing most hills faster. It means highballing on the open road. These advantages also result in operating economies—fewer stops for gas and oil—less time in the shop, because engines and all power transmitting parts last longer.

Your dealer will be happy to explain the value of Eaton 2-Speed Axles and tell you how Eaton's exclusive planetary gearing and positive lubrication assure long axle life.

EATON
2-Speed Truck
AXLES





Axle Division

EATON MANUFACTURING COMPANY

CLEVELAND, OHIO

PRODUCTS: SODIUM COOLED, POPPET, AND FREE VALVES • TAPPETS • HYDRAULIC VALVE LIFTERS • VALVE SEAT INSERTS • JET ENGINE PARTS • ROTOR PUMPS • MOTOR TRUCK AXLES • PERMANENT MOLD GRAY IRON CASTINGS • HEATER-DEFROSTER UNITS • SNAP RINGS SPRINGTITES • SPRING WASHERS • COLD DRAWN STEEL • STAMPINGS • LEAF AND COIL SPRINGS • DYNAMATIC DRIVES, BRAKES, DYNAMOMETERS

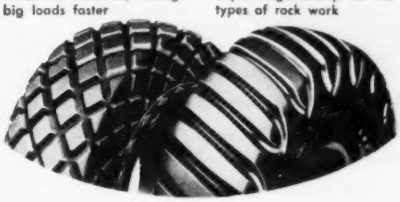
Count on this tire to cut costs!



Two more reasons why It Pays to BUY and SPECIFY GOODYEAR!

ALL-WEATHER
Finest for flotation, rolling big loads faster

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Super-tough champ for all types of rock work



OPERATING costs go d-o-w-n when you use the Goodyear Sure-Grip, the tire you *know* you can depend on for long, *uninterrupted, economical* service.

Sure-Grip is First Choice with cost-conscious construction men because its specially engineered O-P-E-N C-E-N-T-E-R tread and extra-massive, balanced lug bars make it tops for drive-wheel traction—tops in terms of low cost per cubic yard, low cost per operating hour — *over-all low cost that makes your equipment earn more for you!*

GOODYEAR

We think you'll like "THE GREATEST STORY EVER TOLD"— Every Sunday— ABC Network

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WHAT DO YOU MEAN
Selective Concreting!

WHY THE CONTRACTOR USED FOUR LONE STAR CEMENTS ON BORGER'S FINE, NEW HOTEL

● Fast-growing Borger, Texas, saw another Lone Star grand slam, doubled and redoubled in quality cement:

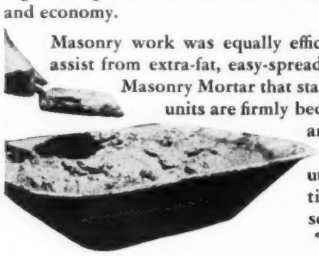
LONE STAR AIR-ENTRAINING PORTLAND CEMENT used for foundations, columns, walls and first two floor slabs;

'INCOR'* 24-HOUR CEMENT for upper floor slabs, when weather turned cold, saving forms and costly heat protection;

LONE STAR PORTLAND CEMENT for the roof, after weather turned warm;

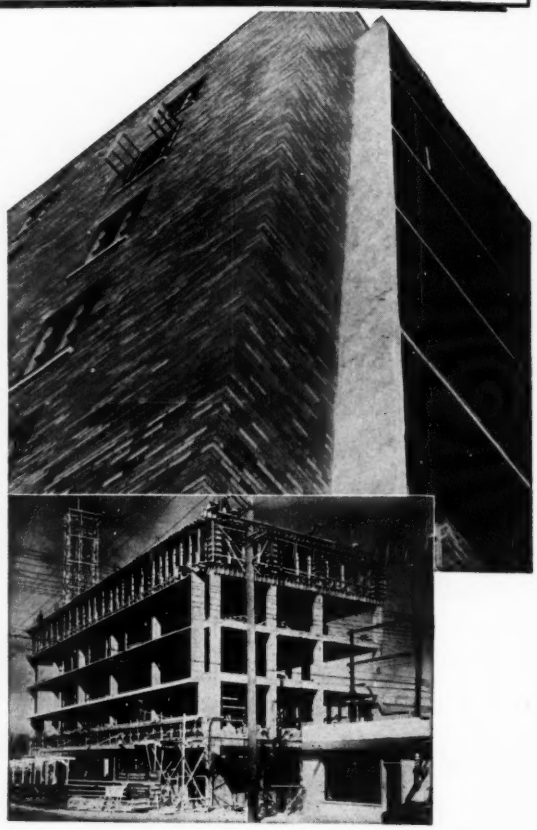
LONE STAR MASONRY CEMENT in all brick and tile work.

Selective concreting—which simply means selecting the Lone Star Cement that shows the lowest concreting cost—produced maximum construction speed and economy.



Masonry work was equally efficient—with an assist from extra-fat, easy-spreading Lone Star Masonry Mortar that stays plastic until units are firmly bedded, provides ample strength, assures the utmost in long-time, low-cost service.

*Reg. U.S. Pat. Off.



HOTEL BORGER, Borger, Texas

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R. C. CANTRELL & ASSOCIATES, Pampa, Texas

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Lone Star Cements supplied by:
WES-TEX BUILDING MATERIALS CO.,
Borger, Texas

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Offices: ALBANY • BETHLEHEM, PA. • BIRMINGHAM • BOSTON CHICAGO • DALLAS • HOUSTON • INDIANAPOLIS • JACKSON, MISS. KANSAS CITY, MO. • NEW ORLEANS • NEW YORK • NORFOLK RICHMOND • ROANOKE • ST. LOUIS • PHILADELPHIA • WASHINGTON, D. C.

LONE STAR CEMENT, WITH ITS SUBSIDIARIES, IS ONE OF THE WORLD'S LARGEST CEMENT PRODUCERS: 17 MODERN MILLS, 125,000,000 SACKS ANNUAL CAPACITY



LONE STAR CEMENTS COVER THE ENTIRE CONSTRUCTION FIELD

The CONSTRUCTOR

BUILDINGS • HIGHWAYS • AIRPORTS RAILROADS • PUBLIC WORKS

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COVER

This month's cover picture signifies the part the general contracting industry is playing in the atomic energy program which is held to be the primary defense of the free world against the aggression of communist nations. So long as America and its allies maintain a substantial lead in atomic energy development, their enemies are more likely to defer provoking all-out war. Atomic energy depends on the construction industry as well as the science professions for its progressive, creative development. Shown on the cover is the beginning of a building which houses a chain-reacting atomic pile six stories high, 120 feet long, and 100 feet wide.

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Do it the sure way—

....with a NORTHWEST—for the HEART of the job!

HERE'S a spot where the profits begin—The Batcher Plant! Put the batcher plant "down" because of crane failure and it costs you money out on the grade.

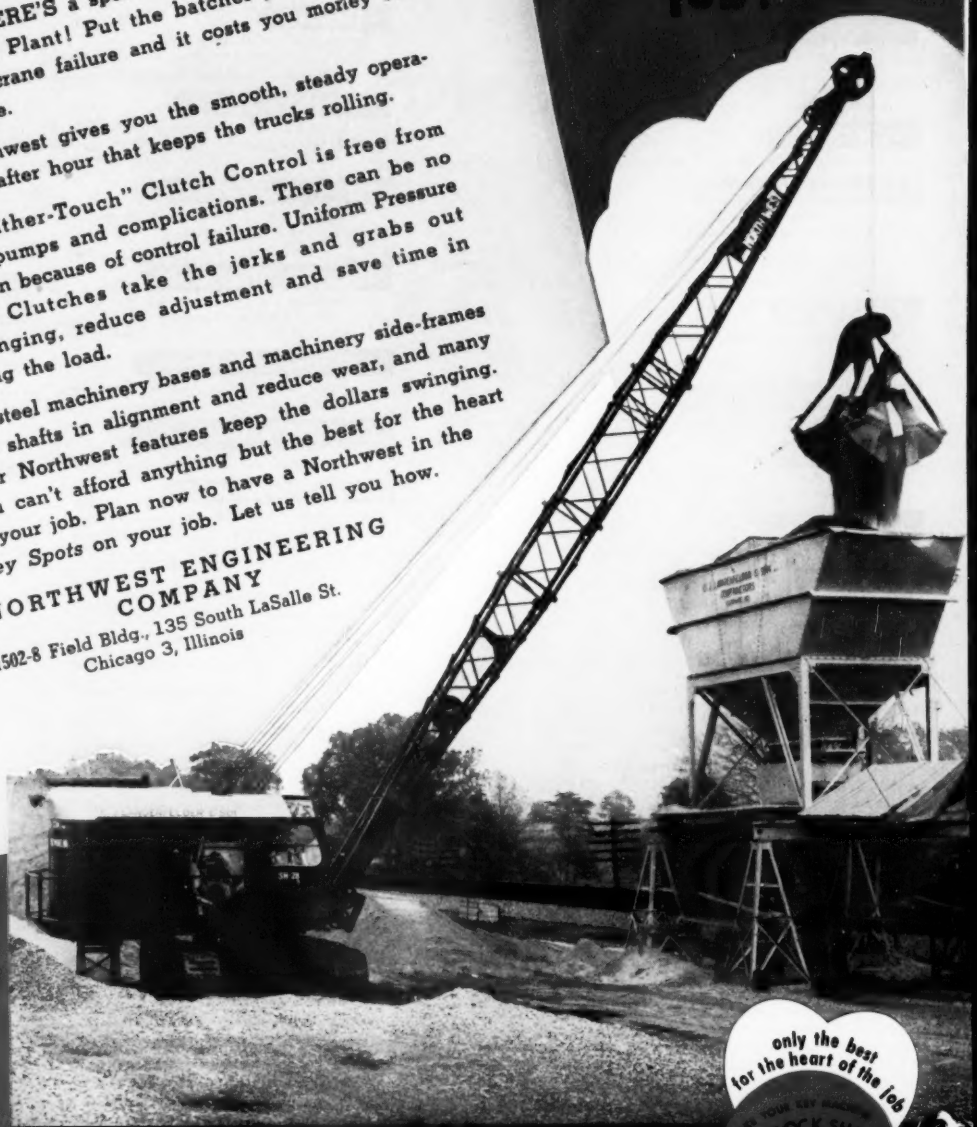
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Construction activity rose seasonally in March to round out the largest first-quarter volume of new construction on record, U. S. Departments of Commerce and Labor reported. Total volume of new construction put in place during March was estimated at $2.1 billion, 21 per cent more than March 1950. Total volume of new construction put in place during the first quarter was nearly $6.1 billion, 21 per cent above first quarter last year. Dollar volume of industrial construction in March was double a year ago. Private residential construction was 14 per cent ahead of last March. There were increases also in military, public utilities, highway and conservation work.

Summary of business conditions by Federal Reserve Board showed that industrial output and employment were maintained at advanced levels in February and early March. Retail sales declined from record January rates and inventories rose faster. Bank loans to business continued to expand rapidly. Wholesale commodity prices showed little further rise. Value of construction contract awards increased by almost 10 per cent in February and continued to rise seasonally in March. Bond yields increased following announcement of a new Treasury offering.

The United States already has been made "measurably safer" from possible aggression, Charles E. Wilson, director, Office of Defense Mobilization, reported. One year from now, with unflagging determination and effort, we and our allies will have achieved a formidable strength in many phases of modern warfare, he reported, and two years from now we should have military and economic strength sufficient to give us reasonable safety against aggression. (Page 21)

Maximum production impact of mobilization program will be felt early in 1952, Mr. Wilson reported. National defense now takes 8 per cent of gross national product. By the end of 1951 it will take about 15 per cent. As now foreseen, the defense program, at its height, will not require more than 20 per cent. At the peak of World War II, 45 per cent was taken.

An immediate increase in taxation by at least $10 billion, and the postponement of additional tax increases until 1952 were recommended by Secretary of Treasury Snyder when appearing before the House Ways and Means Committee April 2. The committee has now started to draft the next revenue measure. Mr. Snyder stated that with revenues about $2.7 billion higher and expenditures about $3 billion lower than had been anticipated the $10 billion increase would be sufficient for now.

A.G.C. recommendations for tax legislation, "to accord the general contractor the rights and privileges enjoyed by members of other industries," was presented to House Ways and Means Committee March 16 by Managing Director H. E. Foreman of The Associated General Contractors of America. A.G.C. recommended carry-back of cost of maintenance and repair of equipment to the preceding year; more liberal allowances for depreciation on equipment; clarification of transportation tax; and correction of inequities for contractors in recent excess profits tax act. (Page 65)

Renegotiation of contracts which have "a direct and immediate connection with national defense" by a five-man independent board was provided in Public Law 9 signed by the President on March 23. The law does not affect contractors or subcontractors whose total defense work is less than $250,000 a year. The Renegotiation Board is to be an independent body appointed by the President with approval of the Senate. Contractors may file with United States Tax Court for a redetermination if unsatisfied with the Board's decision. (Page 64)

National Labor Relations Board on April 2 ordered the first elections to be conducted among employees in a single craft in construction operations of the building industry. It was the first time NLRB had ruled upon requests for such elections. Elections were requested by locals of the A.F.L. plumbers' union in Baltimore and Olean, New York. Eight other A.F.L. international unions asked the board to refuse elections to employees in the industry as a matter of policy. Full effects of the decisions could not be determined immediately for general contractors, but the restrictive language of the decisions made it clear that they were not jurisdictional awards, and no change would be made in operations of the National Joint Board for the Settlement of Jurisdictional Disputes.

Need for a wage adjustment board to administer the national wage stabilization program in the construction industry became more apparent as various regulations were issued by the Economic Stabilization Agency. Regulations issued apply to all employers, but require clarification and interpretation to fit construction operations. Establishment of such a board not expected for at least two weeks after labor representatives return to an expanded National Wage Stabilization Board. (Page 71)

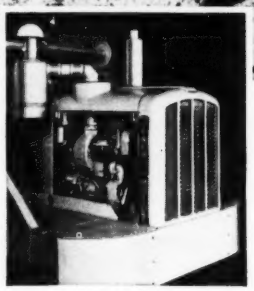
Consumers' Price Index, page 17, is published this month as revised by U. S. Bureau of Labor Statistics "to make it a more accurate measure of price changes in the mobilization period." Prices of goods and services purchased by moderate-income city families advanced 1.5 per cent from December 1950 to January 1951. Prices in January 1951 were 7.9 per cent higher than the previous January. The improved, adjusted index was 181.5 for January 1951. Calculated on the old basis it would be 181.6.

Leadership of The Associated General Contractors of America for 1951 will be in the capable hands of the officers who took office at close of the 32nd annual convention in Boston. President is Glen W. Maxon, of the Maxon Construction Co., Dayton, Ohio. Vice President is Arthur S. Horner, of the A. S. Horner Construction Co., Denver, Colorado. William Muirhead, of the Wm. Muirhead Construction Co., Durham, North Carolina, was re-elected secretary-treasurer. Actions of the association will be carried out by the staff under direction of Managing Director H. E. Foreman.

A comprehensive review of the 32nd annual A.G.C. convention is given in this issue of THE CONSTRUCTOR. The annual report of its activities was published in the March issue, starting on page 43. The Convention explored the problems of general contractors in carrying out essential defense and civilian construction, but took action with the determination that the industry would carry out its obligations with skill, integrity and responsibility.



Capable of digging speeds up to 136 inches per minute, Parsons 250 Trenchliner owned by Vanderver and Christian, Tyler, Texas, is powered with a 8-cylinder GM Series 71 Diesel engine delivering 89 H.P. at 1800 RPM. Mr. W. N. Christian says, "We are well pleased with this machine and the GM Diesel engine is giving excellent performance."



Faster Way
TO DIG A DITCH

THIS Parsons 250 Trenchliner, powered by a General Motors Diesel, took on the toughest kind of a pipe-trench job—8 miles of 42" trench, depth to 17 feet—through soil ranging from hard red clay to sand. Line of travel was from Lake Tyler to Tyler, Texas, through rough, hilly country, across numerous creeks with "soft" approaches.

Jobs like this are a "natural" for GM Diesels because of their more efficient 2-cycle operation. With power at every piston downstroke, these engines start at the press of a button—give instant response to widely fluctuating power demands—and cut fuel costs to the core.

Discover for yourself how General Motors Series 71 Diesels can step up your production and lower your operating and maintenance costs. Get all the facts from your local GM Diesel dealer or write direct to us.

DETROIT DIESEL ENGINE DIVISION

SINGLE ENGINES... Up to 275 H.P. **DETROIT 28, MICHIGAN** MULTIPLE UNITS... Up to 800 H.P.

GENERAL MOTORS

DIESEL BRAWN WITHOUT THE BULK

GM GENERAL MOTORS DIESEL POWER

A Series of Graphs Outlining the Construction Trend

Compiled by The Associated General Contractors of America

TREND OF CONSTRUCTION COSTS

The average of construction costs in the principal construction centers of the United States for March stands at Index Number 376, according to the A.G.C. Index. The cost figure for March 1950 was 346. The 1913 average equals 100.

WAGE AND MATERIAL PRICE TRENDS

The average of wages in the principal construction centers of the United States stands at 497 for March. One year ago the average stood at 464. The average of prices paid by contractors for basic construction materials for March stands at Index Number 296. The average a year ago stood at 267. The 1913 average, again, equals 100.

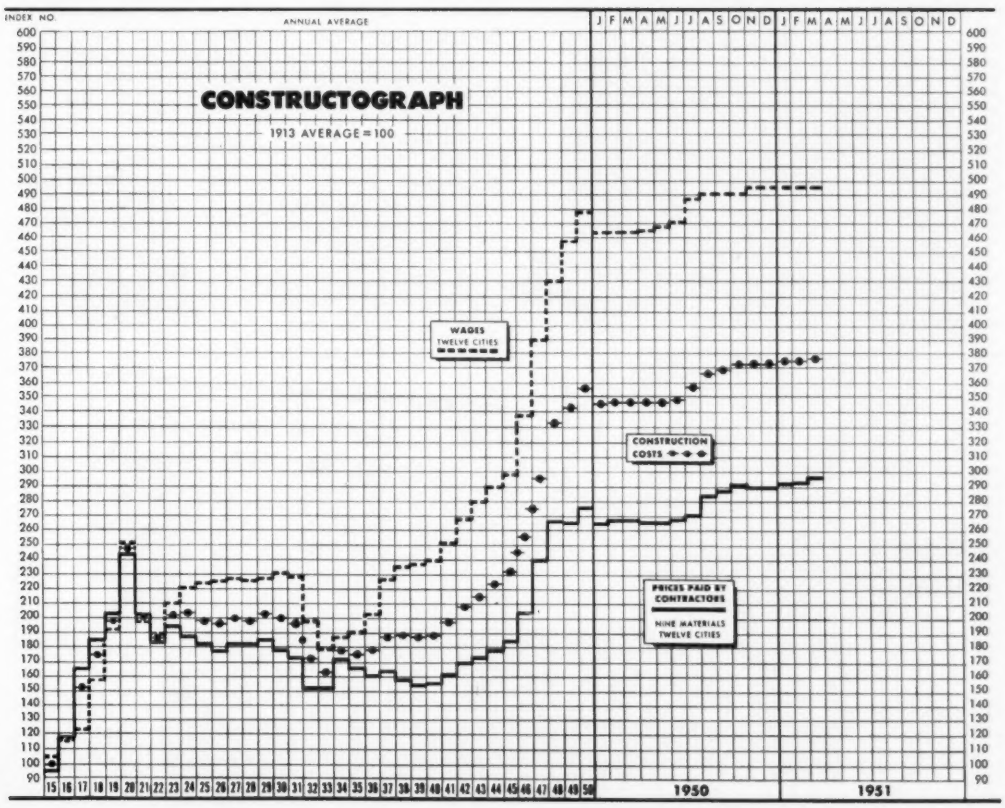
CONTRACT AWARDS IN 37 STATES

The volume of contracts awarded during February (Index Number 231, based on 1936-1938) is an increase of 20 points from January, and an increase of 60 points from February 1950.

REVENUE FREIGHT LOADINGS

Revenue freight loaded during the first 12 weeks of 1951 totaled 8,738,771 cars. For the same period in 1950, loadings amounted to 7,403,601 cars. This represents an increase of 18 per cent.

● Wage, Material Price and Construction Cost Trends



WHAT'S YOUR CONCRETING PROBLEM?



Solve it with
BLAW-KNOX STEEL FORMS

WHATEVER your concreting problem—big project or small job—simple or tough—you'll get the job done faster and at lower cost when you use Blaw-Knox Steel Forms. There's no delay for dismantling or assembling . . . fewer operations are necessary . . . and they're tailor-made to fit *your* job, with many perfected details impossible to duplicate in wood.



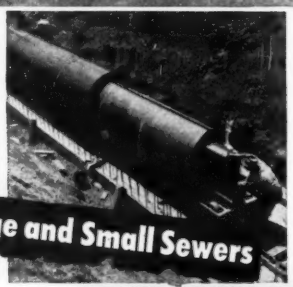
Call on BLAW-KNOX ENGINEERING SERVICE

BLAW-KNOX engineers, backed by the 40-year experience of the original and most prominent manufacturer of steel forms for engineered construction, will gladly recommend the correct forms for your job. They specialize in helping you plan for the simplified forming methods that save time and materials and keep costs low. This Blaw-Knox consultation service is available to any contractor without obligation.



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Ask about BLAW-KNOX **CONCRETE BUCKETS**

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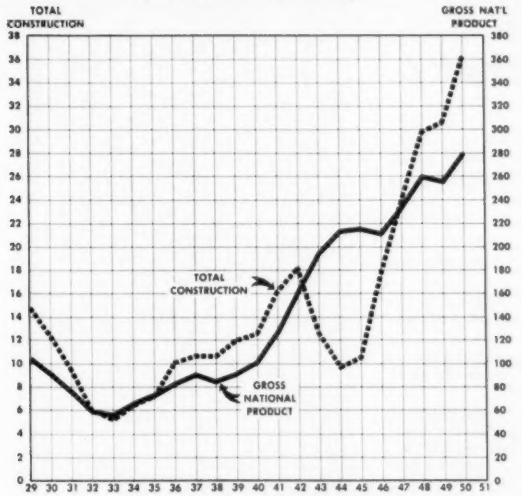


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● TOTAL Construction compared with Gross National Product

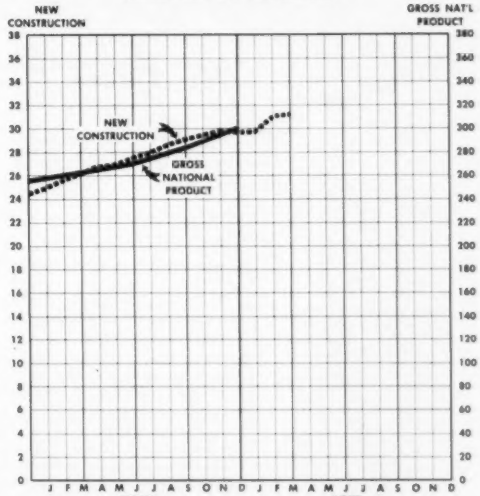
(BILLIONS OF DOLLARS)



DATA SUPPLIED BY DEPT. OF COMMERCE

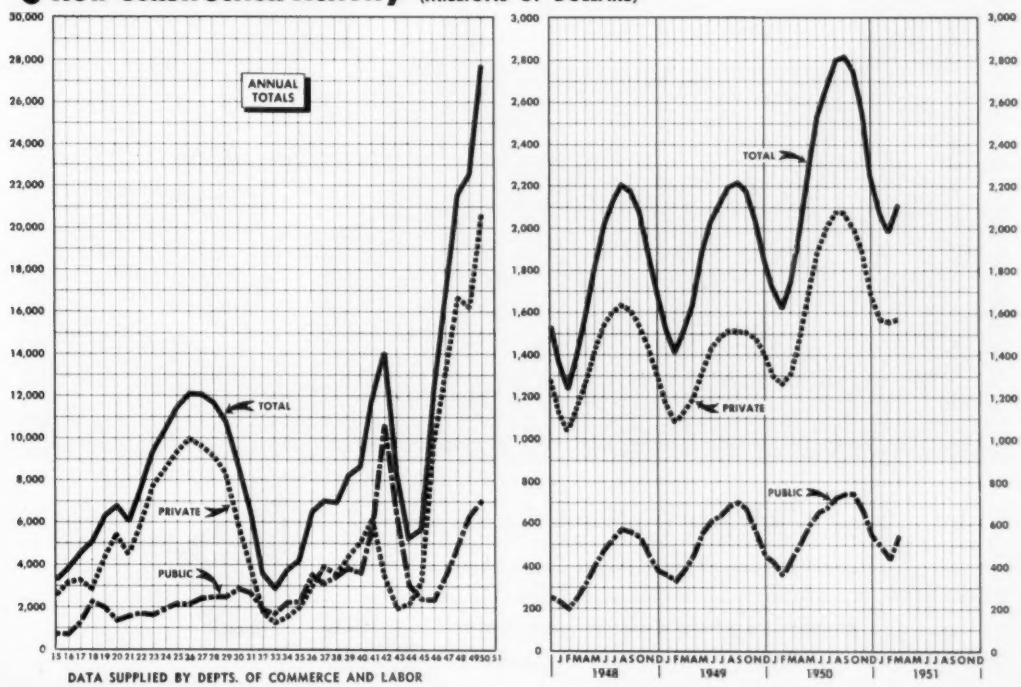
● NEW Construction compared with Gross National Product*

(BILLIONS OF DOLLARS)



** Seasonally adjusted at an annual rate*

● New Construction Activity (MILLIONS OF DOLLARS)



DATA SUPPLIED BY DEPTS. OF COMMERCE AND LABOR



Put this PUSH in Your Pocket!

The "big push" you get with an Oliver "FDE" Crawler and Heil Cable Dozer pays off in more dirt moved per day . . . more profit for your pocket!

Look at the profit-making advantages this "dirt-moving" team gives you:

- ★ **Rugged Oliver power that puts more "push" behind the blade.**
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- ★ **No operator fatigue. "Air steering," an optional Oliver feature, lets the operator control the tractor with just 2 fingers of one hand. No "footwork" required. Finger-tip dozer control unit on operator's right makes dozer operation easy. Operator faces forward in a natural, non-tiring position. Excellent visibility.**

Check these and the many other advantages of Oliver Crawler Tractors and Heil Cable Dozers with your Oliver Industrial Distributor. He'll show you why you'll profit with the "big push."

Oliver air steering "FDE" with Heil Cable Dozer clearing the way for a new road.

THE OLIVER CORPORATION

Industrial Division: 19300 Euclid Avenue, Cleveland 17, Ohio

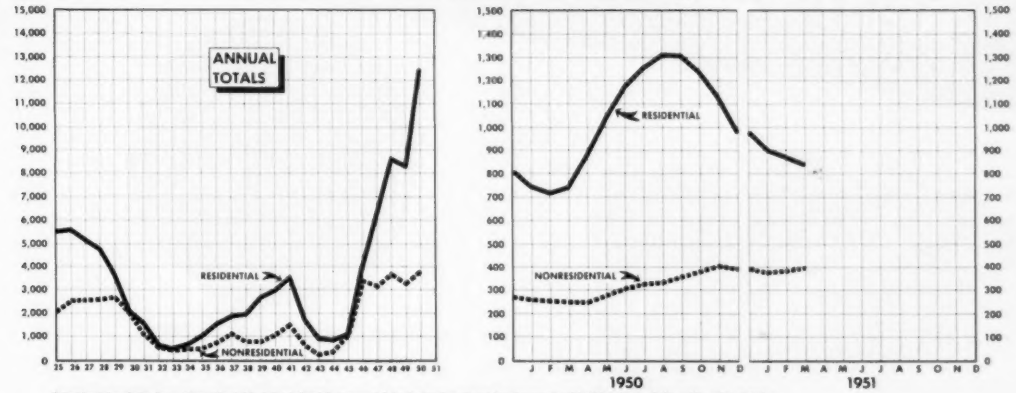


A complete line of Industrial wheel and crawler tractors



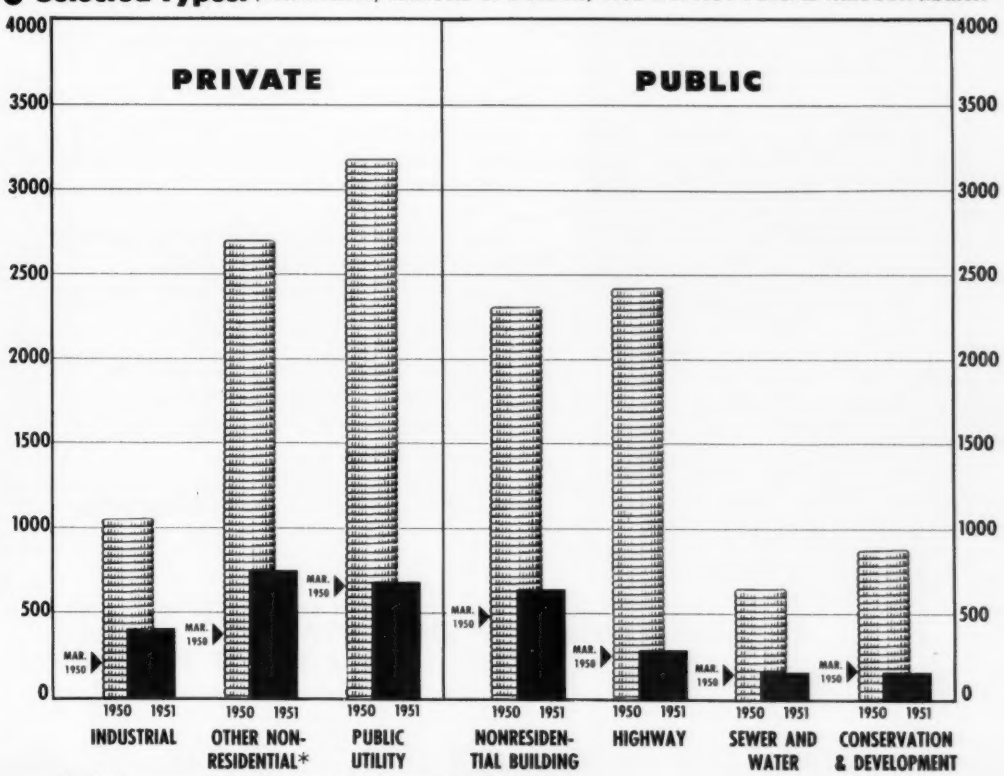
NEW CONSTRUCTION ACTIVITY

● Private Residential and Nonresidential Building* (MILLIONS OF DOLLARS)



* Residential excludes farm; Nonresidential includes industrial, commercial, institutional, and social and recreational building, but excludes public utility building.

● Selected Types: (CUMULATIVE, MILLIONS OF DOLLARS) 1950 and 1951 VOLUME THROUGH MARCH



*Includes commercial, institutional, and social and recreational building

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15-ton Rear-Dump . . . semi-rigid or spring mounted drive axle.



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There is a Euclid model to meet every requirement for off-the-highway hauling of earth, ore, coal, or rock . . . and body designs for all types of materials.

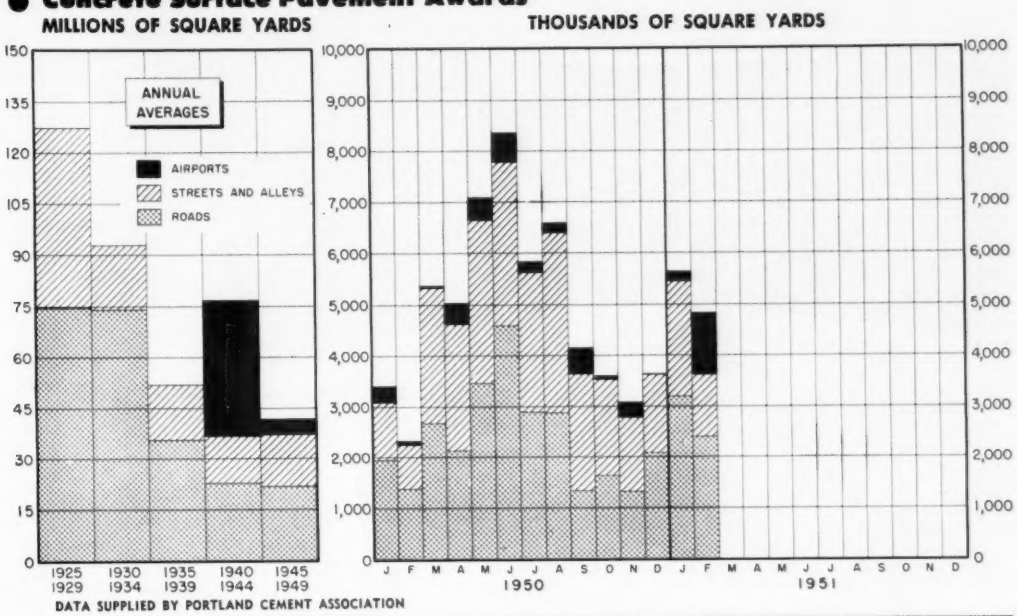
Have your Euclid Distributor show you how Euclid job-proved equipment can lower your hauling costs, or write for literature on current models.

The EUCLID ROAD MACHINERY Co.
CLEVELAND 17, OHIO

MORE LOADS PER HOUR— MORE PROFIT PER LOAD

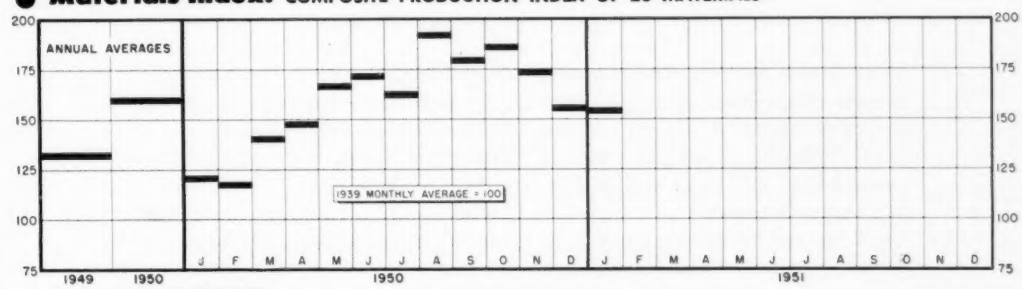
EUCLIDS *Move the Earth*

● Concrete Surface Pavement Awards



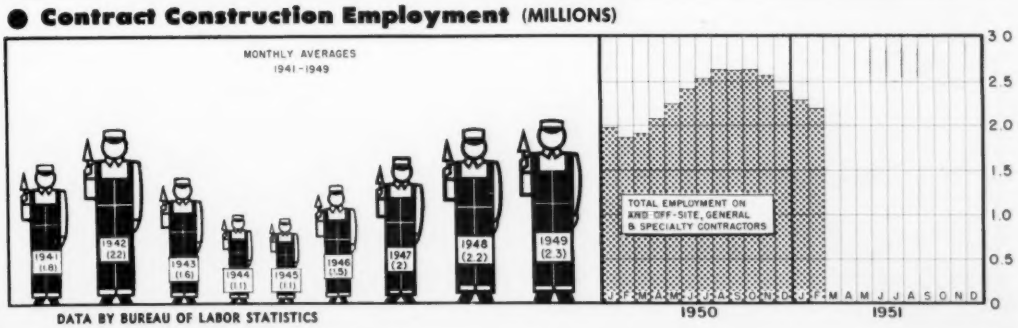
DATA SUPPLIED BY PORTLAND CEMENT ASSOCIATION

● Materials Index: COMPOSITE PRODUCTION INDEX OF 20 MATERIALS



DATA BY DEPT. OF COMMERCE

● Contract Construction Employment (MILLIONS)



DATA BY BUREAU OF LABOR STATISTICS



Almost gone is the grey, grim, penned-up classroom. In its dreary place is the warm cheerful softness of sunlight and an atmosphere of freedom. An atmosphere built by a room-length, ceiling-high wall of graceful Fenestra* Windows.

And the most remarkable thing about this beautiful wall of Fenestra Intermediate Steel Windows is not the great areas of light-inviting glass, not the controlled ventilation you get with smooth-swinging vents —it's the fact that it's not expensive.

Compare the *performance*, the *quality*, the *installed cost*, the *maintenance cost*, of *standardized* Fenestra Windows with any window on the market.

Get *standardized* Fenestra Intermediate Steel Windows—engineered to cut the cost of building.

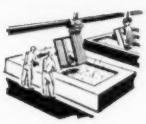
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Fenestra Hot-Dip Galvanized Windows
No Maintenance Problems! No More Painting!

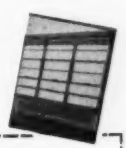
ENGINEERING—Window fabrication is specially engineered.

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poured-in-place gypsum roof decks



The fast moving hummingbird builds his nest to "required specifications." That's his building specialty.

The fast moving U.S.G. roof deck contractor builds SHEETROCK-PYROFILL roof decks to required specifications. That's his specialty. And only he can do it.

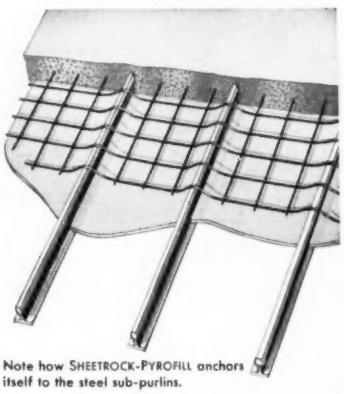
So your U.S.G. roof deck contractor is the man to call when your specifications call for **1.** SHEETROCK-PYROFILL; **2.** U.S.G. Precast Metal Edge Gypsum Plank or **3.** Short Span, or 3" (Nailing Type) Gypsum Tile.

Incombustible, lightweight, strong—SHEETROCK-PYROFILL roof decks meet the most exacting requirements. They go in fast—up to 20,000 feet poured a day—set in less than 30 minutes. And they're easy to maintain.

For the name of your U.S.G. roof deck contractor, write Industrial Sales Division, United States Gypsum Company, Chicago 6, Illinois.



Plant of Westinghouse Electric & Manufacturing Co., Chicago. Bruce A. Gordon Co., Chicago, engineers. SHEETROCK-PYROFILL Roof Deck (203,000 sq. ft.) installed by Anning-Johnson Co., Chicago.



Note how SHEETROCK-PYROFILL anchors itself to the steel sub-purlins.

United States Gypsum

For Building • For Industry

Gypsum • Lime • Steel • Insulation • Roofing • Paint

For Moderate Income Families in Large Cities

(Formerly referred to as the "Cost of Living Index," compiled by the Bureau of Labor Statistics)

THIS table indicates the average changes in retail prices of selected goods, rents and services bought by the average family of moderate income from December 15, 1948 to February 15, 1951.

They are presented here for use by employers who may wish to take these cost of living data into consideration when contemplating adjustments of wages based on increased living costs.

The Bureau of Labor Statistics surveys 10 key cities every month and 24 other large cities quarterly. Prices are obtained on food, fuel, apparel, house furnishings and miscellaneous goods and services. Rental information is obtained quarterly only for all cities. The computations are based on the indexes for the years 1935-39, which are taken as the average of 100 points.

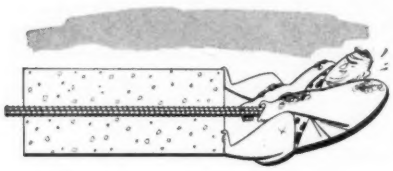
	1948	1949		1949	1950		1950	1951	
	DEC. 15	JAN. 15	FEB. 15	DEC. 15	JAN. 15	FEB. 15	DEC. 15	JAN. 15	FEB. 15
Average	171.4	170.9	169.0	167.5	166.9	166.5	178.4	181.5	183.8
Birmingham, Ala.	174.8	.....	171.7	168.4	166.9	166.4	184.0	188.2	189.8
Mobile, Ala.	173.5	173.7	.....	167.4	.....	.....	176.6	.....	.....
Los Angeles, Calif.	172.7	172.7	171.3	165.4	166.9	166.1	175.8	181.3	184.1
San Francisco, Calif.	176.7	.....	.....	171.5	.....	.....	182.8	.....	.....
Denver, Colo.	.....	171.0	.....	.....	164.5	.....	.....	184.9	.....
Washington, D. C.	.....	.....	164.1	.....	.....	163.6	.....	.....	179.2
Jacksonville, Fla.	176.2	.....	.....	175.5	.....	.....	186.5	.....	.....
Atlanta, Ga.	.....	.....	170.1	.....	.....	168.3	.....	.....	187.5
Savannah, Ga.	.....	176.7	.....	.....	169.1	.....	.....	189.2	.....
Chicago, Ill.	175.4	174.9	172.9	173.2	172.3	172.0	184.1	185.4	188.5
Indianapolis, Ind.	.....	173.6	.....	.....	170.6	.....	.....	184.4	.....
New Orleans, La.	.....	.....	173.2	.....	.....	170.6	.....	.....	187.9
Portland, Maine	167.1	.....	.....	162.8	.....	.....	171.4	.....	.....
Baltimore, Md.	174.0	.....	.....	170.9	.....	.....	180.7	.....	.....
Boston, Mass.	164.7	163.9	161.4	162.7	161.5	160.7	171.2	173.5	175.5
Detroit, Mich.	172.8	171.6	170.7	169.1	168.5	168.1	181.0	184.2	186.2
Minneapolis, Minn.	170.8	.....	.....	167.4	.....	.....	178.8	.....	.....
Kansas City, Mo.	.....	165.1	.....	.....	160.6	.....	.....	175.6	.....
St. Louis, Mo.	171.1	.....	.....	167.8	.....	.....	180.2	.....	.....
Manchester, N. H.	.....	172.3	.....	.....	167.1	.....	.....	180.6	.....
Buffalo, N. Y.	.....	169.8	.....	.....	164.8	.....	.....	180.8	.....
New York, N. Y.	169.2	169.2	166.8	164.9	163.7	163.7	175.1	177.8	180.8
Cincinnati, Ohio	172.2	172.0	169.7	167.8	167.7	167.2	178.7	182.3	183.9
Cleveland, Ohio	.....	.....	172.5	.....	.....	168.7	.....	.....	186.2
Portland, Ore.	.....	178.6	.....	.....	173.8	.....	.....	190.4	.....
Philadelphia, Pa.	170.6	170.4	168.5	167.3	165.9	165.1	178.2	181.0	185.4
Pittsburgh, Pa.	174.9	174.6	172.1	170.3	169.9	169.5	180.8	183.4	185.6
Scranton, Pa.	.....	.....	166.8	.....	.....	163.7	.....	.....	180.8
Memphis, Tenn.	174.3	.....	.....	170.8	.....	.....	180.2	.....	.....
Houston, Texas	173.8	172.6	170.2	173.2	172.8	172.0	184.8	190.1	191.0
Norfolk, Va.	.....	.....	170.6	.....	.....	167.1	.....	.....	187.1
Richmond, Va.	.....	166.5	.....	.....	161.8	.....	.....	179.8	.....
Seattle, Wash.	.....	.....	174.3	.....	.....	171.6	.....	.....	188.3
Milwaukee, Wis.	.....	.....	168.7	.....	.....	167.6	.....	.....	187.5



At the annual convention of the American Concrete Institute in 1949, Committee 208 on Bond Stress proposed changes in design stresses for concrete reinforcing bars. These proposals were made after Bureau of Standards tests proved that certain "improved" reinforcing bars could live up to higher standards.

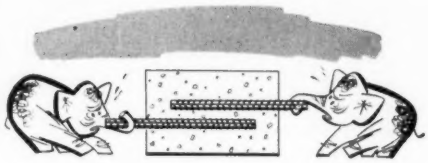
At the 1950 convention, the ACI Building Codes Committee adopted the proposals of Committee 208. And in February 1951, the Institute officially accepted the new building code change.

It is interesting to note that Inland HI-BOND has, for eight years, offered all advantages of higher bonding properties now officially recognized by ACI.



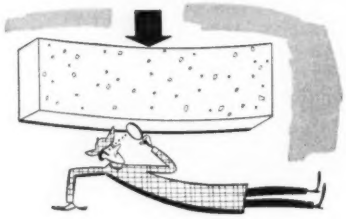
1 Increased bond stresses and greater resistance to slip

See reports on National Bureau of Standards research by Arthur Clark . . . ACI Proceedings, Vol. 43, p. 381; Vol. 44, p. 437; Vol. 46, p. 161; by C. C. Fishburn . . . ACI Proceedings, Vol. 44, p. 289.



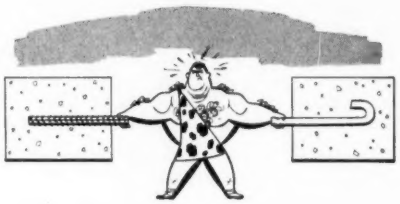
2 Increased efficiency at splices

See reports on National Bureau of Standards research by Ralph W. Kulge and E. C. Tuma . . . ACI Proceedings, Vol. 42, p. 13.



3 Reduced width of tensile cracks

See reports on National Bureau of Standards research by David Watstein and Norman Seese, Jr. . . . ACI Proceedings, Vol. 41, p. 293.



4 Hook anchorages unnecessary in most applications

See reports on National Bureau of Standards research by C. C. Fishburn . . . ACI Proceedings, Vol. 44, p. 289; by F. E. Richart . . . ACI Proceedings, Vol. 45, pp. 97 and 237.

See new ACI Building Code

INLAND **HI-BOND®**

The reinforcing bar with the built-in anchorage



INLAND STEEL COMPANY 38 S. Dearborn St., Chicago 3, Illinois

Sidelights for Contractors

By John C. Hayes, *Legal Adviser*

Taxes

Excess Profits Tax.—The Treasury Department has issued Regulations 130 governing excess profits taxes. The new regulations as promulgated do not cover all sections of the Excess Profits Tax Act of 1950, but will be amplified from time to time in the future. While as a matter of expediency the usual preliminary notice to taxpayers was not given prior to release of the regulations, it is contemplated that such notice will be given prior to approval of supplemental provisions, so that taxpayers may submit comments and objections.

Income Tax Audits.—The Commissioner of Internal Revenue has advised the House Ways and Means Committee of a change in his audit policy. Beginning with the tax year 1950, the commissioner states that every income tax return of $25,000 and over will be audited at least once every two years, with a simultaneous audit of the prior year's return, thus assuring complete coverage of the returns in this class. Previously, examination of returns in such group had been limited to those which appeared to have the greatest errors.

Sale of Residence.—Several bills are now pending in the Ways and Means Committee to waive the income tax on a capital gain realized on sale of a residence when another home is purchased for personal use under prescribed circumstances. In addition, it is proposed that any loss realized on sale of a home be deductible as a capital loss, contrary to the present prohibition against any allowance therefor.

Accounting Method.—A circuit court states that under the revenue law the selection of a system of keeping books is primarily for the taxpayer, and that the statute requires only that the taxpayer's books shall be kept fairly and honestly, without any attempt to evade the tax. Absolute precision is not required. The court held that the cash method of accounting properly reflected a petitioner's income where the latter had used this method, though with slight deviations for accrued items, during a period of more than twenty years.

Allocation of Income.—Where a wholly owned subsidiary made a loan to its parent corporation without charging interest, the tax court has refused to uphold the Commissioner of Internal Revenue in allocating part of the parent's income to the subsidiary as representing interest on the loan. Section 45 of the Code was intended to prevent the manipulation or improper shifting of gross income or deductions between two or more businesses, the tax court states, and not to create income where none in fact existed.

Refund Claims.—A district court has dismissed a taxpayer's suit for refund of income taxes where the claims for refund on which the suits were based did not set forth in detail facts and grounds to apprise the commissioner of the exact basis of the claims.

Tax Refunds.—In accord with the general rule that refunds of taxes, the deduction of which in prior years resulted in tax benefits, generally are to be treated as income when received, the commissioner has now issued a mimeograph to the effect that tax refunds arising out of renegotiation of war contracts also are to be treated as income in the year received.

Transferee Liability.—While a corporation contemplating dissolution may, by requesting prompt assessment of its tax liability, take advantage of an 18 month period of limitation within which any deficiency must be assessed, the tax court has ruled that such a request by the corporation does not similarly restrict the time within which deficiencies can be assessed against stockholders receiving corporate assets as transferees. A period of another 12 months exists for assessment against transferees.

Public Contracts

Renegotiation Act.—The Senate and the House have agreed upon the proposed Renegotiation Act of 1951, and the measure goes to the President for his approval. The act applies to contractors having receipts or accruals of $250,000 or more a year, and to contract brokers of $25,000 or more a year. Renegotiation proceedings are to be conducted by a five-man board set up as an independent establishment in the executive branch of the government. Appeals from decisions of the board may be taken to the tax court.

Failure to Rule.—Where a government contracting officer refused to rule on a contractor's claim for additional compensation, despite a disputes clause in the contract requiring him to rule on claims and making his decision conclusive, a federal court of appeals held that such refusal constituted a breach of contract giving rise to a right to the contractor to bring suit for damages under the Tucker Act.

Liquidated Damages.—The Comptroller General has decided that he has no authority under section 10 (a) of the Federal Property and Administrative Services Act amendments of 1950 to remit liquidated damages paid under a government contract executed prior to the effective date of such section, even though the liquidated damages accrued at a later date.

Right of Setoff.—According to a ruling by the Comptroller General, the government is entitled to set off a public contractor's unpaid withholding taxes against a claim by a performing surety who was subrogated to the contractor's claim to retained percentages earned by the contractor. Notwithstanding certain decisions by the court of claims, the Comptroller General states that he has followed this rule over a period of several years, similarly as in cases of paying sureties.

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Runabout SERVICE DITCHER



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The Hydra-Crowd — hydraulic transmission of power to the driving wheels — allows the operator of the Runabout, with a twist of the wrist, to keep it going at top digging efficiency through varying soil conditions.

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Send for Bulletin 705-A which describes completely all the advantages you gain when you use a Model 705-A Runabout Service Ditcher.

with HYDRA-CROWD

finger-tip hydraulic control of crowding speed independent of bucket line speed

The Model 705-A Runabout now features the Hydra-Crowd, which provides an infinite range of crowding speeds from 0 to 16 f.p.m., independent of bucket line speed. With its 15 m.p.h. road speed and Vertical Boom milling action — and new Hydra-Crowd control — the Runabout combines mobility and digging efficiency to make possible lowest cost per foot of trench in all digging conditions the year around.

203

Outstanding Runabout Performance Features

- Year around operation
- 5½", 7½", 10½" cutting widths down to 48" deep
- 15 m.p.h. road speed
- Control of digging from cab or ground
- Fastest digging in everything from loam to coral rock
- Instant stop—quick reverse
- Digs clean trench—no ramp to be dug by hand
- One-man operation

Barber-Greene, Aurora, Illinois

A Look Ahead

A BRIEF LOOK into the future was given by Director of Defense Mobilization Charles E. Wilson in the concluding section of his first quarterly report to the President. It is a clear, concise statement of what can be expected in the mobilization program. Mr. Wilson stated:

"The first nine months of the defense mobilization program have been—for the effort as a whole—a tooling-up stage.

"The Congress has enacted the basic laws and the first big new appropriations. We have organized the necessary new agencies, planned the program, completed the specifications for much of the new equipment, begun ordering in quantity, and created the basic machinery for international collaboration.

"In terms of military strength, we have achieved much since last June 25, but we are still far from achieving the strength we need.

"One year from now, with unflagging determination and effort, we and our allies will have achieved a formidable strength in many phases of modern warfare. Two years from now we should have military and economic strength sufficient to give us reasonable safety against aggression.

"In terms of civilian standards of living, the impact of the defense program has hardly yet been felt. The coming year will be different. Shortages are bound to come for some civilian goods—particularly products made from metal.

"The following year, if our program is successful in preventing war, shortages may begin to ease and we can probably begin to talk about taking off controls. In 1953, we should be in a position to maintain a high level of military expenditures on top of a healthy civilian economy—which, at that time, will be free to resume its upward trend.

"But the production side of our task is in many ways the less difficult. A tougher test of our ability to survive the present crisis lies in the other side of the problem—stabilization.

"The success of our production effort demands that we win the battle against inflation. To win that battle calls for a subordination of selfish ends to the common welfare in a measure beyond what is commonly demanded in any period short of actual war. It calls for a fair presentation of its claims by every segment of society, an open and willing participation by all concerned, and a readiness to abide by decisions which are arrived at through fair and honest means. It calls for every organized group to consider the welfare and just demands not only of other organized groups but of the unorganized, the consumer, the public as a whole.

"The nation demands, and must be given, the same degree of support by its citizens now, in a period of peace, that it would receive in a war. The times are no less challenging.

"All of us must remember in the months ahead that it is vastly better to prevent a war, if we can, than to win one—and the surest course toward prevention of World War III is through building the might of America and with it the might and the security of the free world."

A. G. C. 32nd Annual Convention

THIS issue of THE CONSTRUCTOR is devoted almost exclusively to a comprehensive account of the 32nd annual convention of The Associated General Contractors of America held in Boston from February 26 to March 1.

The convention was an important event in A.G.C. history, and in the construction industry.

The principal work of the convention was to study the tasks which the construction industry generally, and the general contracting industry particularly, have to perform for the national defense and for the civilian economy during the mobilization program.

As indicated by the fact that it requires almost the entire editorial content of a 128-page magazine to report on all of the activities, a tremendous amount of work was done by the convention.

While the host chapter, The Associated General Contractors of Massachusetts, provided an excellent program of entertainment for the men and their wives, this was a working convention with representatives from the industry from all parts of the country seriously seeking to determine what must be done in the future.

Emerging from the actions of the convention, the discussions in committee and division meetings, from the attention given to speakers, and the talk in the corridors was the factor which was outstanding: that this industry has the determination to accept its full responsibilities and to discharge them with distinction.

Industry representatives present were keenly aware of the difficulties which would be encountered during the year in completing essential defense and civilian projects. They were also aware that faulty government actions could needlessly impair the industry's ability to operate with maximum effectiveness. But it was abundantly clear that there was a determination to overcome all obstacles which might come into the industry's way.

Another feature of the convention was attitude of focussing attention on the fundamentals of the questions involved. This was keynoted by the distinguished educator, Daniel L. Marsh, President of Boston University, whose opening day address on "Fundamentals of the Republic" was inspiring.

This convention marked another milestone in the association's history, and gave it the impetus to perform greater work of benefit to its members, the construction industry and the public.



Bridge over the Mississippi River, Hastings, Minnesota, 2600 tons fabricated and erected.

built by down-to-earth methods

saves you money, saves you time!

3 HUGE FABRICATING PLANTS OPERATE AS A UNIT

- Clinton Bridge Corporation
- Gage Structural Steel Corporation
- Midland Structural Steel Corporation

The bridge you see here in the course of construction is over the mighty Mississippi River at Hastings, Minnesota.

Have you noticed what's different about the erecting technique? Sure you have . . . it's the speedy water-level method of raising and joining the members, instead of the usual slow inching of erecting derricks over newly laid sections at the bridge floor level.

Exclusive construction innovations, with modern fabricating short cuts which can be carried on simultaneously in 3 plants operating as a huge manufacturing unit, combine to save you time and money.

Our engineering-estimating department would like to quote on your jobs wherever fabricated structural steel is specified. Send your plans and specifications to us.

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A.G.C. 32nd Convention Eyes Increasing Emergency Problems

- 1,000 Attend Well-Run Boston Meeting
- Urge Steps for Favorable Industry Conditions

» POSITIVE recommendations to alleviate increasing problems faced by the construction industry in carrying out required defense and essential civilian projects were made by the nation's leading general contractors at the 32nd annual convention of The Associated General Contractors of America, February 26-March 1, at the Hotel Statler in Boston.

The approximately 1,000 in attendance, representing the more than 5,800 members of the association throughout the United States and Alaska, heard leaders in the fields of government, industry, labor and education speak on particular problems being encountered by the country's second largest industry in the course of the nation's accelerating mobilization program.

Other Convention Events:

Building Division	— *Page*	*76*
Heavy-Railroad Division	— *Page*	*81*
Highway Division	— *Page*	*86*
Legislative Report	— *Page*	*64*
Public Relations Report	— *Page*	*68*
Labor Report	— *Page*	*71*
Apprenticeship Report	— *Page*	*78*
Accident Prevention Report	— *Page*	*99*
Secretaries' Council	— *Page*	*102*
Joint Cooperative Committees	— *Pages*	*95, 96*

General Industry Conditions

As the convention opened, it had for consideration these results of a survey of current conditions and prospects for the next 90 days conducted by the A.G.C. just prior to the meeting:

The industry, while feeling the impact of the partial mobilization program, will have the capacity to carry out defense and essential civilian construction with speed and efficiency.

While most general contractors are busy completing projects under way, defense work in many areas is not expected to take up the subsequent slack, with the prospect of substantial idleness and unemployment. In the highway field, there already is much unused capacity, and the outlook is not optimistic.

Shortages are increasing in materials containing metals, in new construction machinery, and in repair parts.

In general, uncertainties of what will happen in the mobilization program are making it more difficult for contractors to plan their operations in advance.

In order to obtain conditions under which the industry can best serve the public interest, the association:

Materials—In general, urged the mobilization agencies to control critical metals at the production stage rather than prohibit use of finished products, and in particular, requested modification or delay of the effective date of orders prohibiting the use of certain copper, brass and aluminum products to permit prompt completion of all buildings started prior to issuance of the orders as well as essential projects placed under construction subsequent to the orders.

Pointing to the losses that would result from delay due to the necessity of redesign and use of unsatisfactory substitutes which also are in short supply, the convention estimated that more than $5 billion of building work of all types will be delayed or stopped, whether or not they were started before the Korean war.

Equipment—Urged appropriate government agencies to establish simple and effective procedures for contractors to obtain spare parts and supplies necessary to keep construction equipment in operating condition so that the industry can perform defense and urgent civilian work at the speed required and the efficiency expected.

Contract Conditions—Recommended national and local study of legislative authority to permit emergency termination of contracts for reasons beyond the control of contractors.

Advance Planning—Recommended that Congress continue to make loans available for planning of non-federal public works, and that public agencies continue the orderly planning of projects in order that they may be started

Convention Makes News

News of the A.G.C. annual convention was published and broadcast throughout the nation. Reporters from press associations, daily newspapers and business publications attended the meeting. Daily news of the meeting was carried on the morning and afternoon wires of the press associations. Items for news broadcasts were taken from these dispatches. The address of the Federal Civil Defense Administrator was broadcast on a national network. Clippings show national coverage of the event.



A.G.C. 1951 officers: Managing Director H. E. Foreman, Secretary-Treasurer William Muirhead, President Glen W. Maxon and Vice President Arthur S. Horner.

promptly and completed economically when possible.

Highways—Because of the great need for a continuing highway construction program, recommended that the Bureau of Public Roads be named the claimant agency for allocation of materials, with the authority to delegate to state highway departments the allocation of materials to particular projects in the states.

Civil Defense—Urged general contractors throughout the country to offer services to civil defense authorities in planning most effective use of construction organizations, and recommended that civil defense authorities utilize such organizations in order that unnecessary public expenditures will not be made to purchase equipment or establish new organizations.

Wage Adjustment Board—Authorized A.G.C. participation in a board to administer the wage stabilization program in the construction industry, similar to the Wage Adjustment Board for the Construction Industry during World War II.

Overtime and Working Conditions—Authorized continued negotiations with government departments and the A.F. of L. Building and Construction Trades Department for stabilization of overtime pay, shift operations, holidays and other working conditions, with the proviso that no agreement would be binding on any A.G.C. member except by his written stipulation.

Fee Contracts—Requested government agencies, when defense urgency requires the award of cost-plus-a-fixed-fee contracts, to give realistic consideration when determining the fees to the costs of doing business, to the non-reimbursable expenses of the contractor, and to equitable adjustment when scope of the work is increased. Also asked steps to avoid harmful effects on lump-sum projects under way when fixed-fee contracts are later awarded in the same area.

Equipment Rentals—Asked a review of rates set in the Department of Defense document, "Uniform Rental Rates for Contractor-Owned Construction Plant Under Cost-Plus-A-Fixed-Fee Contracts," which are so low that they do not compensate the contractor for ownership expenses of his equipment on defense projects.

Engineers—Endorsed cooperation with the American Society of Civil Engineers and other engineering organizations to seek increases in the salary scales of engineers in public service to levels commensurate with their responsibilities.

Accident Prevention—Endorsed a movement of "New Emphasis on Accident Prevention" by general contractors.

Valley Authorities—Reaffirmed past objections to the establishment of valley authorities, and again expressed confidence in the manner in which existing agencies, subject to the control of Congress, plan and carry out the development of resources in river basins.

The convention adopted a memorial for the late Gayle G. Armstrong, Roswell, New Mexico, who had been nominated by the Governing and Advisory Boards last September for vice president in 1951.

New Officers Installed

Glen W. Maxon, president of the Maxon Construction Company, Inc., Dayton, Ohio, prominent heavy construction firm, was installed as 1951 president, succeeding Walter L. Couse, president of Walter L. Couse & Company, Detroit building firm.

In Memoriam

The 32nd annual convention paused to honor the late Gayle G. Armstrong in a special memorial.

Mr. Armstrong, of Roswell, New Mexico, who had been active in A.G.C. affairs for years, was nominated at the fall meeting of the Governing and Advisory Boards to be vice president for 1951, but died before the convention.

The memorial stated, in part:

"In the A.G.C., he took action in the belief that the association should perform work of benefit to the public, to the construction industry, and to its members. He was a living example of his association's motto of skill, integrity and responsibility . . . He will be missed, but his influence will be felt as long as the ideals for which he stood continue to have significance and meaning."

The convention also expressed the association's sense of loss over the deaths of members during the year and instructed the national office to inform their families of its action.

Arthur S. Horner, A. S. Horner Construction Company, Denver highway-heavy organization, succeeded Mr. Maxon as vice president.

Past President William Muirhead, Durham, N. C., was re-elected secretary-treasurer.

H. E. Foreman, Washington, D. C., is managing director.

Officers elected for the three occupational divisions of the association are:

Building Contractors' Division—H. C. Turner, Turner Construction Company, New York City, chairman, succeeding D. A. Harmon of the Harmon Construction Company, Oklahoma City, Oklahoma. The new vice chairman is W. Murray Werner, The Werner Company, Shreveport, Louisiana.

Highway Contractors' Division—E. J. Maupin, Jr., Dodge Construction, Inc., Fallon, Nevada, chairman, succeeding N. K. Dickerson, Jr., Dickerson, Inc., Monroe, N. C. New vice chairman is F. W. Heldenfels, Jr., Heldenfels Bros., Corpus Christi, Texas.

Heavy Construction and Railroad Contractors' Division—George Heller, of Johnson, Drake & Piper, Inc., Minneapolis, chairman, succeeding John MacLeod, Macco Corp., Paramount, California. New vice chairman is Edward P. Coblentz, McLean Contracting Company, Baltimore.

President Couse

In opening the convention, President Couse cautioned contractors approaching new work to be sure of the availability of all materials required and of the timing of their delivery.

"There seems to be no question of a large program of defense construction ahead within the foreseeable future, which, because of the nature of the work will leave some areas rather dry of work and others competing for both men and materials. It will mean a migration of workers and many substitutions for materials in short supply.

"It further will require a close cooperation between all branches of this industry," he added.

Mr. Couse reviewed the growth of local cooperative groups between A.G.C. chapters and other industry groups patterned after the national cooperative committees of the A.G.C. He added that the settlement of jurisdictional disputes indicates a growth in the assumption of responsibility by labor. (Text begins on Page 28.)

The construction industry, which

performed a record $28 billion of new construction during 1950, will be limited in its volume this year principally by the decisions to be made in the mobilization program and the availability of materials, Managing Director H. E. Foreman, Washington, D. C., told the convention.

In presenting his annual report, Mr. Foreman described the rapidity with which controls are being formulated in Washington, and the necessity of providing counsel to many executives administering regulations affecting construction who were not familiar with the industry.

Mr. Foreman described how the emergency had required increasing diversion of the association's efforts from the normal long-range program on which the staff concentrated during the first five months of 1950.

As expected government controls are tightened over construction, he added, it will become increasingly important that official consideration be given to the needs of the civilian economy for essential projects so that its strength can be maintained and developed to carry the defense program. (Managing Director's report was printed in the March CONSTRUCTOR.)

Welcome to Massachusetts

Welcoming addresses were given by Governor Paul A. Dever, by Greeter John D. Brown for Mayor John B. Hynes, and by President Charles Solomon of the A.G.C. of Massachusetts, on behalf of the host chapter.

Fundamentals of the Republic

In an inspiring address, Dr. Daniel L. Marsh, president of Boston University, appealed for a return to the ideals on which the American Republic was founded, and proposed "10 commandments" for adoption by the political parties, which were widely publicized by the wire services.

Dr. Marsh held that there is a great need for protecting Congress from encroachment upon its powers by the President, and that this one bulwark between the people and possibilities of a dictatorship should be exalted and respected, rather than belittled. He decried the expansion of bureaucracy, called for full and free discussion of governmental actions, and a return to the spiritual ideals of the founders of America. (Text begins on page 50.)

Economic Policy

Formulation by the government of a national policy beyond price and wage controls was urged by Wesley F. Rennie, executive director of the Committee for Economic Development.



Governor Dever (right) with A.G.C. of Massachusetts President Solomon.

"We need a policy," he said, "that will convince our people that our government is facing the realities of the situation—that all of the available means will be used to deal with the basic forces of inflation, so that direct wage and price controls will have a reasonable chance of success. We can then proceed first to live with controls and later, as production rises and demand is stabilized to live without them."

To make controls work, he advocated holding down demand by (1) drastic reduction of government expenditures not essential to defense, (2) sharp increase in taxes to increase revenue and restrain consumers' expenditures, (3) restriction of bank credit and establishment of a National Monetary Commission, and (4) a national program to encourage savings. (Text begins on page 36.)

Civil Defense

In his first major address since taking the office of Civil Defense Administrator, Millard F. Caldwell, Jr., stirred the country with his candid summary of what the Russians could do, and how Americans must organize their civil defense mechanisms for protection. Mr. Caldwell's address was widely publicized and broadcast over a national network.

Mr. Caldwell told the convention, "I recognize the importance of this group and the vital part you will have to play in the future of civil defense," and asked for assistance in filling important civil defense posts.

He revealed that his organization believes there are not enough materials, labor or time to build deep community shelters, "But with the know-how which you possess in your organization, we can identify in every community those areas . . . that are relatively safe, and with your know-how

Appreciation

All those who have attended the 32nd annual convention of The Associated General Contractors of America, in Boston, Massachusetts, from February 26 to March 1, 1951, express their most sincere appreciation to the convention committee, the officers, members and staff of the A.G.C. of Massachusetts for the arrangements and the entertainment program which have helped to make this convention and outstanding success, and for the genuine hospitality with which we have been welcomed.



Left to right: Charles B. Solomon, president, and Nicholas B. O'Connell, vice president, A.G.C. of Mass.; Daniel L. Marsh, president of Boston University, who addressed the convention; and Moses Slotnik, chairman of the convention committee of the host chapter.

and your help, we can take other areas and make them relatively safe by shoring them up and strengthening them and adding the necessary means of egress and ingress." (Text begins on page 40.)

Panel on Controls

Two National Production Authority officials directly connected with construction controls addressed the convention Tuesday, following which they submitted to questions from the floor which clarified some misunderstandings by contractors and otherwise furnished suggestions for study by NPA.

Frank R. Creedon, NPA Assistant Administrator for Facilities and Construction, in his first address since returning to government service, explained his bureau's functions, and outlined the intent and reasons behind the M-4 Order limiting construction, and materials objectives.

He pointed out that the construction industry now "has a much higher position" in the government than during the last war, and paid tribute to A.G.C. Managing Director Foreman for his work to bring that about.

With the preface that conservation of steel is the key to construction controls, Mr. Creedon revealed that new expansion now under way will bring an added 13.7 million tons of steel ingots to production by the end of 1953, totaling 16 to 17 per cent more than present capacity of 104 million tons. Aluminum production will almost be doubled by the middle of 1952, he added.

"I am hopeful that we can, in the not too distant future, be in a position, when all this additional steel capacity comes in, to discontinue entirely the construction controls, and with it the organization that administers it," he concluded. (Text begins on page 31.)

Following Mr. Creedon, John L. Haynes, director of NPA's Building Materials Division, explained orders intended to conserve materials. He said that while officials have held off on general priorities as much as possible, "industrial expansion is making a very strong bid for preferential treatment."

Mr. Haynes noted that the country is "caught very shy" of schools and hospitals, which were not built during the depression because of lack of money, nor during the war due to materials going to the military, nor in the postwar period because "we were too slow getting started." (Text begins on page 34.)

Equipment Outlook

Adoption of a controlled materials plan as a guide for allocating materials to essential industry was urged by Ralph K. Stiles, president of the Construction Industry Manufacturers Association. He declared shortages of critical materials, principally steel, were seriously hampering construction equipment manufacturers in supplying the industry with its essential tools.

"With no organized plan yet operative that would allocate materials to essential industry, it is a mad scramble to get what materials are available and it is impossible to maintain planned production programs. The result is costly operation and reduced output." In any event, he added, deliveries would often be disappointingly slow.

Mr. Stiles, who is executive vice president of Austin-Western Company, Aurora, Illinois, said many firms are faced with a slowdown or possible shutdown; that many are forced to buy on the grey or black market; and that thousands of tons of steel are being imported from Europe at prohibitive costs in the face of the highest steel production in this country in history.

He listed the findings in a recent exhaustive survey completed by the C.I.M.A. for use by NPA in determining what is needed for the industry. (Text begins on page 59.)

Municipal Construction Need

The great need of municipalities for construction of new streets, sewers and other municipal facilities, which has fallen behind badly in the past 12 years, was discussed by Milton Rosen, president of the American Public Works Association and Commissioner of Public Works, St. Paul, Minnesota.

Terming the city the "orphan child" where financing is concerned, he said a greater proportion of highway users' funds, gas taxes and license fees must be made available to cities for construction of highways and bridges.

Mr. Rosen advocated an aggressive promotion by contractors of needed state and municipal public works throughout the country. (Text begins on page 55.)

Defense Construction

Military and naval construction were the topics of Major General Lewis A. Pick, Chief of Engineers, Department of the Army, and Rear Admiral Joseph F. Jelley, Chief of the Bureau of Yards and Docks, Department of the Navy.

General Pick, revealing that $2.4 billion of Army and Air Force construction had been authorized through fiscal year 1951, stated:

"Happily, the Corps of Engineers and the country's contractors will not have to start from scratch. We have been working together for many years —on military problems in time of war, and on the great civil works projects in time of peace. And people who know each other—people who have worked with each other—make a fine team when it comes to getting things done. . . . Thanks—to a great degree —to our civil works functions, we maintain an organization capable of meeting any job which lies ahead."

General Pick advised that through decentralization, division and district engineers of the Corps now have authority to approve the award of negotiated contracts up to $15 million, and architect-engineer contracts up to $500,000. He outlined the Corps' contract policy and procedure in selecting contractors, and discussed equipment problems.

He praised the association's "magnificent contribution" in the Army Affiliation Program, whereby 75 reserve construction units, mostly of battalion size, are sponsored by A.G.C. chapters and branches. Of the 10 called to service, two now are in Korea, "doing a splendid job." (Text begins on page 43.)

Admiral Jelley said that due to the Navy's foresight to build its facilities well during the last war, its present major task is rehabilitation and modernization. He said $450 million had been appropriated for Navy public works and $149 million for civil engineering since the start of the Korean conflict.

Expressing the Bureau of Yards and Docks' confidence that the majority of its contracts can still be let on competitive bids, Admiral Jelley said bids have been increasing and more closely grouped.

He asked for assistance in recruiting for the Seabee reserve. (Text begins on page 47.)

Highways and Defense

The ever-pressing problem of keeping alive a going highway construction program was discussed by James A. Anderson, president of the American Association of State Highway Officials, and commissioner of the Virginia

State Department of Highways.

He pointed out that in World War II, "too many high ranking persons assumed that our roads were expendable," and today our major highways are less adequate than in the early part of the last war.

Mr. Anderson praised the Department of Defense policy of cooperating with states regarding weight and size limitations on vehicles.

He said highway departments now are working on the problem of collecting, tabulating and forwarding to the Bureau of Public Roads data on the needs for critical materials in highway construction and maintenance. (Text begins on page 88.)

Joseph D. Keenan, secretary-treasurer, Building and Construction Trades Department, American Federation of Labor, spoke of the need for labor and employers in the industry to be consulted about restrictive actions taken. (Page 72.)

Other principal speakers and their topics covered elsewhere in this issue included:

William Stanley Parker, F.A.I.A., Boston, chairman, Committee on Contract Documents of the American Institute of Architects—"The A.I.A. Standard Contract Forms." (Page 77.)

Brigadier General C. H. Chorpening, Assistant Chief of Engineers for Civil Works, Department of the Army, Washington, D. C.—The civil public works program of the Corps of Engineers. (Page 83.)

Claude Friday, Director, New York State Bureau of Aviation—"Work of the Joint Cooperative Committee, National Association of State Aviation Officials, and the A.G.C."

Crocker Snow, president, National Association of State Aviation Officials, and director, Massachusetts Aeronautics Commission. (Page 87.)

Wade Edmunds, assistant chief, Engineering Division, Rural Electrification Administration, Washington, D. C.—"The Rural Electrification Program." (Page 87.)

Grant Bloodgood, chief construction engineer, Bureau of Reclamation, Department of the Interior, Denver, Colorado—"Reclamation's Construction Problems—Present and Future." (Page 82.)

A. C. Clark, Deputy Commissioner for Construction and Maintenance, Bureau of Public Roads, Department of Commerce, Washington, D. C.—"Problems of the Highway Contractor in the Emergency Period." (Page 86.)

A.G.C. Installs 1951 Officers at Convention

» GLEN W. MAXON, Maxon Construction Company, Inc., Dayton, Ohio, assumed the presidency of The Associated General Contractors of America at the 32nd annual convention in Boston, with Arthur S. Horner, A. S. Horner Construction Company, Denver, Colorado, as 1951 vice president.

With the approval of the Governing Board, President Maxon appointed to serve with him and Vice President Horner on the 1951 Executive Committee the following:

H. C. Turner, Jr., New York City; E. J. Maupin, Jr., Fallon, Nevada; George Heller, Minneapolis; D. W. Winkelman, Syracuse, New York; Adolph Teichert, Jr., Sacramento; Walter L. Couse, Detroit; John MacLeod, Paramount, California; L. C. Rogers, Chicago; Fred I. Rowe, Columbus, Ohio; and W. Murray Werner, Shreveport, Louisiana.

The newly-elected directors installed at the meeting were listed in the February CONSTRUCTOR, pages 68-69. In addition, there are the following changes: David A. Olson, Denver, replaces A. S. Horner, now vice president; John R. Lathram, Birmingham, replaces Charles A. Long in District 9, Alabama; and Joseph M. Powers, Fargo, North Dakota, was selected by the Governing Board as the result of a tie vote in District 6.

New Advisory Board members are: A. L. Atherton, Seattle; Geo. H. Atkinson, South San Francisco; Ellis W. Barker, Salt Lake City; H. Guy Campbell, Towson, Maryland; D. L. Cheney, Seattle; E. P. Coblentz, Baltimore; C. E. Cooke, Detroit; Morris E. DeWitt, Poplar Bluff, Missouri; N. K. Dickerson, Jr., Monroe, North Carolina; Fred Fisher, Houston; C. B. Ford, Dyersburg, Tennessee; E. P. Forrestel, Akron, New York; Ben C. Gerwick, San Francisco; H. H. Hall, East St. Louis, Illinois; Ira H. Hardin, Atlanta; D. A. Harmon, Oklahoma City; F. W. Heldenfels, Jr., Corpus Christi, Texas; J. A. Henderson, Winona, Minnesota; V. N. Holderman, Columbus, Ohio; G. W. James, Ruston, Louisiana; Carl B. Jansen, Pittsburgh; Thomas H. Joyce, Jr., Springfield, Illinois; M. B. Killian, San Antonio; George Nilson, Great Falls, Montana; Roy E. Pickett, Detroit; Walter A. Priester, Davenport, Iowa; Leo P. Richardson, Detroit; C. R. Ralph, Topeka, Kansas; Frank W. Robertson, Huntington, West Virginia; Moses Slotnik, Boston; R. A. Smith, Los Angeles; C. P. Street, Charlotte, North Carolina; Arthur H. Wells, Chicago; and M. J. Wylie, Albuquerque, New Mexico.



Retiring President Couse, left, turns over the gavel to 1951 President Maxon as new Vice President Horner looks on.

Address of President Walter L. Couse

- To 32nd A.G.C. Convention Opening Session

» IT IS a real privilege for me, on behalf of our association, to welcome you to our 32nd annual convention here in Boston. I say this because it has been a real privilege to have been your president this past year and to sense through direct contact the tremendous job our industry is performing for this nation and the free peoples of the world.

In each of the past 32 years of the existence of our association there have been tremendous steps-forward realized for our industry. This past year has been no exception. When we consider that an outlay of $27\frac{3}{4}$ billion of new construction was put into place for the year, it is apparent that it has been a record year both in the physical volume of work and the dollars spent.

This great increase in the volume of work required of our industry carried with it other problems that challenged the ingenuity. In spite of the expected large volume of work at the beginning of the year, contractor firms all over the country met the available work in the first quarter in a competitive manner that at times was almost ruinous. At that time, one of the fears of your officers and staff was that the high reputation for quality work completed with efficiency and economy that the members of this association had created over the years and during World War II in particular, would suffer because of the low, seemingly below, cost prices contractor firms were bidding for the work they obtained.

However, it has been my observation over the country where I have talked with owners, architects, engineers and particularly government agency representatives, that our member firms reacted in every favorable way as they sought new economies and developed still greater efficiencies to offset as far as possible the low prices obtained. To me, this particular situation, though tough while it lasted, carried with it a stabilizing effect that was healthy for the industry as we developed a new cost consciousness.

In spite of a large increase in the manufacture of construction materials and equipment, there developed many items in terrifically short supply with increased costs for those available.

This latter problem is continuing and, because of the tremendous defense program developing, the shortages are becoming more aggravated and severe. In analyzing our work ahead, considerable caution in approaching new work is imperative in being sure of the availability of all materials required and the timing of their delivery.

There seems to be no question of a large program of defense construction ahead within the foreseeable future which, because of its nature, will leave some areas rather dry of work and others competing for both men and materials. It will mean a migration of workers and many substitutions for materials in short supply.

It further will require a close cooperation between all branches of this industry from the designer through the contractor, supplier, equipment man and labor toward realizing every economy and efficiency, as well as the obtaining of all the materials to accomplish the defense requirements of this nation and the civilian projects which are so necessary to maintain a secure national economy.

During the past year local cooperative groups between our chapters and architects, engineers, producers of material and equipment and labor have multiplied rapidly, all reasonably patterned after the cooperative work of the national association. All branches of our industry have expressed satisfaction with the theory back of these meetings.

The scarcity of jurisdictional disputes over the country has gotten to the point where, as I heard in one meeting, they might be referred to as "jurisdictional discussions," which definitely shows a growth in the assumption of responsibility by labor. There are exceptions and always will be, but in general this condition is much improved.

We can most certainly look ahead to more restrictions, regulations, tax increases and renegotiation of government contracts, even though our work might be as a subcontractor and not as a prime contractor. Some of the regulations suggested by some agencies, if later imposed, will become dangerously close to creating a police state in Washington. Only constant vigilance and aggressive action on the part of all peoples interested in our free economy can defeat these efforts; and knowing the desires of those within our industry, it is the pattern of thinking of your officers and national staff to keep alert and abreast of every development of this nature so that it can be stopped at its source if possible.

This situation in Washington, accompanied by an unusual amount of confusion, is greatly to be deplored and needs to be rationalized, but men of the calibre of Charles Wilson, of whom there are many now moving into Washington by the insistence of those sensing this need for improvement, should in time correct this situation.

During the past year, your officers and national staff have held frequent meetings with the authorized government agencies on civilian defense, and they now look to us as *the* organization to coordinate all work involving clearing and rehabilitation of bombed areas. We were also requested to assume the responsibility for the removal of the injured from wrecked buildings where they are pinned down by debris. Your association is proud that it has been so chosen for these great responsibilities.

Also, during the past year many of your officers and association members and those from the national staff, have been chosen to sit in on advisory committees to the various defense and government agencies.

In June, all members of the Executive Committee and the past presidents back through 1940, which included the war years, met with representatives and heads of all defense departments of the government, particularly the military, offering the services of our association in determining how we might fit into the defense requirements of our government.

At this time we reiterated the policy of our association favoring the lump sum contract wherever plans are so prepared to permit it, and urged that these departments make every effort to enable this method of working to be realized. These departments have returned many, many times in minor ways for consultation on matters pertaining to our industry and have let us know of their respect for our association and its motives.

Gentlemen, during the past year it has been my privilege to meet with many chapters from coast to coast, and from Florida to the Canadian

border, and the more I contact the members of this association the greater my respect for it has increased. You represent one of the most important parts of the economy of this nation, including its industrial, social, educational and recreational development. Your reputation nationally is excellent.

As a result, the demands on your association, its officers and staff, by your government and private industry, are increasing beyond all expectations of all of us, even as recently as two years ago. Your officers, members of the Executive Committee, and the members of the Governing and Advisory Boards, are realizing this and sense the need for the most careful and far reaching planning for the future. They will need your counsel, your understanding and confidence and your cooperation so that we can grow stronger and more secure in our program ahead.

Only through such planning and programming can this association continue to serve our clients, the owners, whoever they might be, as well as our members, with skill, integrity and responsibility.

Gain in Members, Chapters

The association continued to gain membership in 1950, with a total of 5,777 memberships reported in 112 chapters as of December 31, for a net gain of 266 members during the year, the Membership Committee reported.

Fred I. Rowe, Columbus, Ohio, committee chairman, presented the Cashman Trophy for membership promotion to the A.G.C. of West Virginia, which had an outstanding gain in 1950. Other chapters particularly commended for their work were the A.G.C. of Minnesota, New Orleans Chapter, and the Carolinas Branch.

Four new chapters added to the roster last year are the Central Louisiana and Rio Grande Valley Chapters, Northeast Louisiana Contractors' Association, and the A.G.C. of North Dakota. Probable development of a new chapter in upper Michigan was reported, and growing interest was noted in Youngstown and Columbus, Ohio.

Mr. Rowe commended the example of the A.G.C. of Minnesota in developing the North Dakota group. The committee reported the need for concentrating considerable future effort in the area east of the Mississippi.

Market Development

Due to controls, credit restrictions and the lack of a large volume of defense work coming on the market in the near future to take up the slack, one of the most important problems of the day is the protection or continuing as far as possible of the normal markets of the construction industry, the Market Development Committee reported to the convention.

George Heller, Minneapolis, committee chairman, reported the committee's suggestion that some commercial construction might be permitted to go ahead in communities where there is unemployment or the threat of idleness and where materials are available.

Another recommendation of the committee was that steps be taken to protect the lump sum contractor where a cost-plus-a-fixed-fee contract is later awarded at the same location.

The committee also recommended that public awarding authorities continue the orderly planning of worthy projects, both those which should be placed under immediate construction because of their urgency, and others which, while they may be delayed because of the defense effort, would be ready for construction at the earliest possible time. The federal program of lending interest-free funds to state and local bodies for the advance planning of non-federal public works was praised.

Also discussed was the need for continuance of a balanced highway program, and potential markets in civil defense construction and water pollution control.

Contracts, Specifications

The Korean war and accelerated defense program have brought about a change of emphasis in contracts and specifications matters, Leo P. Richardson, Detroit, chairman of the Contract Forms and Specifications Committee, told the A.G.C. convention.

"Defense agencies are dusting off the files of 10 years ago and looking into negotiated fixed price and cost-plus-fixed-fee contract forms," he said. "The basis of payment for equipment on cost-plus-fixed-fee contracts is under study." He added that meetings will be held on the matter.

Several of the committee's subcommittees and task units have continued their activities with success, Mr. Richardson said.

"Emergency clauses, particularly termination clauses in contracts, have continued to get special attention throughout the country," he added. "Special reference is made to the field of state highway contracts. . . .

"While the emphasis must be changed due to the rapid shift toward defense work, our subcommittees on contract forms and specifications are adapting themselves to these changing conditions, making appropriate contacts so as to be of maximum benefit to our members."



West Virginia Chapter receives Cashman Trophy. Left to right: Frank W. Robertson, Huntington; Managing Director Foreman, Washington; Fred I. Rowe, Membership Committee chairman; Eugene Brown, chapter executive secretary; Ray E. Ritchie, 1950 chapter president; and W. E. Abbitt, chapter treasurer.

Defense Program to Take 20% of Gross Product by Early '52

- Wilson Cites Inflation as Real Peril
- Economy Should Meet All Demands by '53

» BY 1953 the United States should be prepared to meet the needs of all-out war and at the same time support the civilian economy above or equal to the scale which existed before the Korean outbreak.

This is the conclusion of Charles E. Wilson, director of the Office of Defense Mobilization, as stated in his first report to the President, "Building America's Might."

At present, about eight per cent of the nation's gross product is being diverted to defense production. This is expected to increase to about 15 per cent at the end of 1951 and reach its peak of 20 per cent in the early part of 1952 when the full impact of the program will be felt.

Mr. Wilson stated that the shortages in consumer goods will be felt only because of the delay in deliveries and not because production has been prohibited.

Inflation

He urged that every citizen strive to curb inflation, the one evil that could ruin the country. "If we let it, inflation can sap the strength of the economy, and in fact threaten the success of the whole defense effort," he said. The stabilization program, consisting of controls on credit, prices and wages, taxation and savings, must be enforced in all its interdependent parts to be successful.

Current expenditures are running at the rate of $2 billion per month and orders are being placed at the rate of $1 billion per week.

Since July, the combined strength of the Army, Navy and Air Force has doubled to the present size of three million men. Productive capacity has been expanded and will continue until 50,000 airplanes, 35,000 tanks and 216,000 jet engines per year can be produced. The United States will continue to supply the Atlantic Pact nations with military supplies. All this to insure peace and discourage the world aggression of Russia.

Credit and Construction Controls Amended

» CONTROLS on credit for multi-unit housing and nonresidential construction and on alterations and improvements for store-space in department stores have been relaxed to some extent by amendments to Regulation X, the Federal Reserve's real estate credit control order, and M-4, the National Production Authority's basic construction control order.

Now exempted from M-4 regulation are alterations, additions, improvements, or modernization of store-space in department stores if the construction changes cost up to 25 cents per square foot of occupied space for any 12-month consecutive period. Also exempted are National Advisory Committee for Aeronautics projects and terminal warehouses which are an integral part of a common carrier system.

Change Construction Definition

The definition of construction costs has been changed and now reads: "'Construction cost' means the total expense for demolition of existing structures in connection with a new construction, for site preparation, and for building materials, building equipment, labor, and services used in the construction of the particular building, structure, or project, by whomever spent. It does not include the cost of personal property, or the expense for land acquisition, attorneys, architects, and financing."

The following definition has been added to the order: "'Hotel' means either or both an establishment furnishing sleeping accommodations for transient guests, or an establishment classified as a hotel under applicable state, municipal, or other local law."

Regulation X Changed

A new section 5(g) has been added to Regulation X permitting builders of multi-unit residential and nonresidential buildings to apply to a Federal Reserve Bank for an exemption from credit restrictions on projects for which they have made commitments before January 12 in the case of multi-unit residences, and before February 15 in the case of nonresidential new construction or major additions or improvements thereto.

Builders must show that inability to obtain pre-control credit will cause a substantial hardship.

Another amendment provides that Regulation X shall not apply to credit for new homes started before October 12, 1950, until 32 days after completion. The same provision applies to multi-unit residences begun before January 12, and commercial buildings begun before February 15. Major additions and improvements as well as new construction are included.

Controls Checklist

A monthly checklist of governmental regulations and developments.

National Production Authority materials orders:

M-40 sets up a system of "pool orders" under which General Services Administration will place firm orders with manufacturers of machine tools enabling them to schedule production now being expanded to meet urgent needs of the mobilization program.

M-41 regulates the delivery of machine tools produced under the "pool order" system.

M-42 requires wire screen producers to set aside 10 per cent of their monthly production to fill rated orders.

M-43 provides for the equitable distribution of rated orders among construction equipment and machinery manufacturers. Producers' monthly acceptance of rated orders is limited to 50 per cent of average monthly shipments over the six months period ending June 30, 1950, unless otherwise directed by NPA. Types of equipment affected are listed in the order.

M-44 requires certain power equipment manufacturers to file monthly production reports with NPA and authorizes NPA to modify company schedules as it deems necessary, and to allocate to these manufacturers the

steel, copper, and aluminum they require.

M-45 provides for the allocation of any chemical when the need for such regulation arises.

M-46 sets up rules for NPA priority assistance to petroleum and gas industries.

M-47 limits the use of iron and steel in the manufacture of various items none of which are used in construction.

M-48 places bismuth, used in making precision dies and for other purposes, under strict conservation control.

M-49 places columbium and tantalum under strict allocation.

M-4 was amended March 20 to exempt from control the construction of terminal warehouses which are an integral part of the common carrier system, and construction by or for the National Advisory Committee for Aeronautics. Also exempted is any alteration or improvement to storespace in department stores which costs 25 cents or less per square foot of occupied space.

The amendment expands the definition of "construction costs" and adds a definition of "hotel."

M-12 has been issued in slightly amended form to cover copper regulations for the second quarter. Copper fabricators may use 75 per cent of their base period rate of consumption; producers of brass and wire mill products, and producers of foundry products are to continue at their current rates of 80 per cent and 100 per cent respectively.

M-7 has been amended to stipulate aluminum industry regulations for the second quarter. Fabricators are permitted to use 65 per cent of their base period consumption, the same rate in effect for March.

Regulation 4 enables any business to obtain a priority rating for the limited purchase of supplies and equipment needed for maintenance, repair and operation of machines and facilities—the MRO program.

Regulation X has been amended to except from credit regulations builders of multi-unit residences who have made financial commitments on projects prior to January 12, and builders of non-residential projects who have made commitments prior to February 15 provided they prove hardship, and apply for relief before April 15.

National Advisory Board on Mobilization Policy, a World War II agency, has been recreated by the President.

Construction Controls and NPA

• Structural Steel Is Key to Restrictions on Industry

By Frank R. Creedon

Assistant Administrator for Facilities and Construction, National Production Authority



Mr. Creedon

A native of Brockton, Mass., Mr. Creedon was graduated from M.I.T. During the last war he directed the government's construction program of ordnance and chemical warfare plants, the synthetic rubber program, and later supervised building of the atomic bomb plant at Oak Ridge, Tenn. He served a while as Federal Housing Expediter, and in 1948 took charge of design and construction of the atomic bomb plant at Hanford, Wash., until named to NPA last fall.

» THIS is the first talk I have made before a public body since I returned, about four months ago, to government service. I am very pleased that it is this particular occasion—the national convention of The Associated General Contractors.

My subject today might well be called, "The Part That NPA Is Playing in the Construction Field." I would like at the outset to tell you that the construction industry has a higher position now in the government, at least from the organizational point of view, than it ever had before. To explain that a little bit, the NPA consists of three principal operating shops, called bureaus. One is the Program Bureau; the second is the Manufacturing Industry Operations Bureau; and the third is the Facilities and Construction Bureau. This is a much higher place than construction had during the last war.

I would like to take this occasion to pay tribute to a large extent for this recognition to your own "Doc" Foreman, who I see here this morning and who has worked very hard to bring that about.

Construction Bureau Functions

I will describe briefly what the Facilities and Construction Bureau does, and then inform you of what is being done to increase the $64 item—steel capacity—and also what is being done to increase the aluminum capacity.

The Facilities and Construction Bureau has five divisions. One is Tax Amortization; one is the Loan Division; one is the Construction Controls Division; one is the Building Industrial Plant Expansion Division; and one is the Building Materials Division, which I won't go into at all because John Haynes, the director, is here and he thoroughly knows that subject.

The Tax Amortization Division, briefly, recommends whether or not a proposed new facility gets a necessity certificate and the percentage of the certificate. That certificate permits the owner to amortize in five years that percentage of the cost of the facility.

The Loan Division makes direct loans to concerns that need to expand their facilities in order to produce an item that is needed and contracted for by the Military and which could not be obtained except through an expanded facility.

The Industrial Plans Division determines, with the guidance of the Facilities Clearance Committee, what industrial projects are of such urgency that they merit assistance from the government in getting delivery of materials and equipment.

The Construction Controls Division is that division which, in brief, issues licenses covering certain types of construction. I think I had better go

into a little bit more detail on the construction controls, because there seems to be some misunderstanding about the construction controls, or I think if I describe the purpose of the order and the reasons behind it, it may be helpful.

M-4 Order and Steel

This order was put into effect on October 26, and it is described as M-4. That first order simply prohibited new construction in the fields of recreation, entertainment and amusement. In that order, of course, we permitted small job exemptions in the amount of $5,000 in any twelve months' period. Subject to a series of various amendments, this order remained in effect until January 13, when the new, modified present order was put into effect.

The philosophy behind this particular order, I think, needs some explanation. It was apparent to NPA, in its early talks with the Munitions Board, that the requirements of the Military for steel and other materials in short supply were to be great, and the first responsibility of NPA was to provide for these requirements. By "Military," I mean the various direct procurement programs for the national defense, such as the Atomic Energy Commission and the other supporting activities. The secondary responsibility of NPA was to minimize the dislocation of the civilian economy resulting from this "take" of the Military.

The first indication from the Munitions Board was that their requirements would call for approximately 15 per cent of the total United States production of structural steel and for very large quantities of other steel and metal products. Therefore, the original NPA steel orders—15 per cent of the monthly production of structural steel of each plant—were set aside for the acceptance of DO-rated orders, the only priority rating that has been established by NPA, and other set-asides were established for other steel products; for example, this meant that each steel mill was not required to accept rated orders on anyone beyond the 15 per cent set-aside. The net result was that only 85 per cent of the production of structural steel was available for the civilian economy.

It was soon recognized that numerous construction projects needed for the civilian economy called for structural steel and for other steel products which were so important that provision must be made for their requirements. It was obvious that some restriction on construction had to be imposed if steel and other building materials were to be made available for these requirements. If a limitation were placed upon construction in the field of recreation, entertainment and amusement, there would be a very substantial saving of metals and materials in short supply, for it was estimated that approximately three-quarters of a billion dollars of construction went into those fields.

NPA was of the opinion that it would further the defense program and better serve the economy of the country to limit the construction in those fields, making possible procurement of the essential materials for the really essential fields of construction.

Within several months, it became apparent that the Military had underestimated its requirements of structural steel and other metal products, and it was necessary for its program and the program of expansion of plants engaged in military contracts, for greater amounts of these products to be made available. Therefore, the percentage set aside of structural steel was raised in December to 20 per cent, and, similarly, in other steel products, and various restrictive orders applying to other metals in short supply were issued. At the same time, it was recognized that there were many other supporting programs not directly connected with military procurement but necessary for the national defense; for example, the expansion of the steel and aluminum mills, which I will go into briefly a little later on, to provide for additional production and other programs adopted or planned by NPA, such as the building of a great number of freight cars, locomotives, construction of ore-carrying vessels for the Great Lakes, the requirements of the oil country for oil wells, the construction of fast cargo ships and other programs, some of which are still in the planning stage but about to be adopted soon. All of these will call for more and more steel of various kinds, including structural steel and other metals in very short supply.

The net result was, by the middle of January, it was recognized that approximately 35 per cent of the production of structural steel was required. There were two increases—from 15 to 20, and now, in January, to 35 per cent of the production of structural steel needed for the overall national defense program, leaving only 65 per cent for the normal civilian demands, with a similar situation existing as to other metals.

M-4 Order Explained

Even as to this, it was recognized that there were numerous demands to be made for metal products and other metal materials which go into new construction, which would be necessary for projects like hospitals, schools, highways and bridges, and so forth. Therefore, by the middle of January, NPA came to the conclusion that a further limitation on construction must be imposed, and that second "bite" resulted in the M-4 order, which is presently in effect.

A brief explanation of this order might be appropriate. It provides a List A and a List B of purposes for which construction may have been planned. The List A categories in the fields of recreation, entertainment and amusement are about the same as they were in the previous order. List B sets forth types of construction that are restricted and that cannot be started except after obtaining specific authorization from NPA. In order that local situations can be considered and effect given to the knowledge of local conditions, the administration of the entire order, with certain limitations, has been delegated to the regional offices of the Department of Commerce, with some breakdown to the district offices in the heavily populated areas.

This order is designed, we believe, to look forward rather than backward. If a structure of the type appearing in List B were started before January 15, construction may continue. If the carrying out of the prohibition contained in the order inflicts upon the individual concern an unreasonable hardship, an exception may be granted. If anybody wants to commence construction of a building designed for the purposes listed in this List B, he makes application on a particular NPA form that he can get from the various Department of Commerce offices.

The types of projects that are in this list that you have to get licenses for are: a bank, a credit institution or a brokerage establishment, a community or neighborhood building, a structure designed for the furnishing of personal services such as a barbershop, beauty shop, and so forth and so on; a garage, service station, repair shop, laundry, dry-cleaning establishment, tailor shop, hotel, motel, motor tourist camp, trailer camp, loft

building, office building, outdoor advertising sign, printing and duplicating establishment, restaurant; a building designed for the storage, distribution, display or sale of consumer products, for example, retail store, shopping center, wholesale establishment, gasoline filling station, drugstore, soda fountain, florist shop, greenhouse—except that there is no prohibition against wholesale food establishments, wholesale supply facilities for fuel oil, gasoline or coal, gas distribution systems or pipe lines. Also included in the prohibited list are storage warehouses for personal effects.

I might state at this point that the NPA has taken no action affecting the construction of housing of any new type. However, there is already a substantial limitation on housing as a result of Regulation X, issued by the Federal Reserve Board. There are a limited number of exemptions to these prohibitions; for instance, maintenance and repair work is not affected in any way and may be continued. The small job exemption of $5,000 in connection with new construction or in connection with alterations, additions, improvements, or modernizations, applies to List B items as well as List A, as does the permissive section concerning reconstruction following disaster. Construction for or on account of the Department of Defense and Atomic Energy Commission is still exempted. In view of the necessity for and importance of communications in connection with the national defense, buildings and structures in connection with radio broadcasting and television are exempted, as are buildings for printing establishments where the primary use of the building is publication of a newspaper, or printing establishments which are operated by a publishing company primarily for the publication of books and periodicals.

The provision contained in the previous order concerning multiple-use buildings continues to apply to both List A and List B categories. Authorization to commence construction of the List B projects will be granted by NPA if it is determined that the desired construction conforms to the following general requirements:

It furthers the defense effort by providing facilities of the type prohibited in List B, in areas adjacent to military establishments or defense plants, or if considered necessary in connection with the defense program, or if such construction is essential for the maintenance of public health, safety or welfare.

NPA will consider the type and quantities of materials on hand and needed for the construction and the effect on the community at large if the authorization to commence construction should be denied. Criteria have been established to apply to those who administer the order in passing upon applications for authority to construct these projects.

A summary of these criteria may be of interest. The basic policy of NPA is that it is essential that all construction be reduced to the minimum necessary for the defense effort; that there be a reduction in the consumption of materials and equipment used in construction, either by the elimination of non-essential projects or of parts thereof or by deferring projects not immediately needed, and also by appropriate changes in design, which will favor the use of materials most plentiful and will interfere the least with the availability of materials needed for the defense program.

These applications, as I have previously stated, are processed in the field offices, except where the amount exceeds one million dollars or the amount of structural steel exceeds 50 tons. We are going to try to administer this order as intelligently and sensibly as we possibly can.

Steel Is Key to Controls

As I have indicated, the real key is structural steel and, generally, the steel products. Therefore, I think it very pertinent that you people be informed of what the outlook is for getting additional steel capacity. In our tax amortization, we have approved a total of 15,750,000 tons of new facilities to produce steel ingots. When I was with Mr. Jeffers in the synthetic rubber program, he asked me how the program was getting along and I said, "Well, it is making so many tons of butadiene and so many tons of styrene." He stopped me right there and said, "I don't give a damn about that. How much rubber is it making and when is it going to make some more and when is it going to make all that you're talking about?" I therefore thought it might be better not just to talk about 15,750,000 additional tons of ingots, but to tell you when that additional tonnage is coming in; so some five weeks ago I sent a telegram to the president of each one of the big steel companies and asked him what tonnage his company expected, or what additional capacity his company expected to bring in the first six months of this year, the second six months of this year, and ditto for 1952 and 1953. I am pleased to say that we received replies from every steel company, and after adding them up, here is what is expected to happen in additional capacity:

The first six months of 1951, additional 1,916,000 tons;

The second six months of this year, 2,732,000 additional steel tons;

In 1952, the first six months, 3,209,000 additional steel tons;

The second six months of 1952, 4,514,000 additional tons;

In 1953, 1,346,000 tons.

Now, that is a total of some 13,700,000-odd tons that are coming in, according to the schedule, by six-month increments that I have just recited. On January 1, 1951, the capacity of the steel industry was 104,200,000 steel ingots. Adding to this the 13,700,000 that I have just spoken of gives, in round figures, 118,000,000 steel tons. That is a tremendous increase. As a matter of fact, it is roughly 16 or 17 per cent. Of course, you must remember that for every ton of steel ingot capacity that you produce, you have to put into it an awful lot of structural steel and other forms of steel—so to get steel, you have to give or consume steel.

I might talk briefly about the aluminum picture. That is a terrifically important item. We talk about steel, aluminum and copper. The present capacity of the aluminum industry is 761,530 tons of ingots. There is an expansion under way of 536,000 tons. That is going to make a total of approximately 1,300,000 tons of aluminum ingots. Now, a small amount of this additional capacity got in by December 1950; a very substantial amount is getting in by December 1951; and all of it is expected to be in production around the middle of 1952. We are doing and intend to continue to do everything we can to speed getting the steel plants into production and the aluminum plants into production; so I am hopeful that we can, in the not too distant future, be in a position, when all this additional steel capacity comes in, to discontinue entirely the construction controls, and, with it, the organization that administers it.

Construction Materials and Controls

By John L. Haynes

Director, Building Materials Division, National Production Authority



John L. Haynes

Mr. Haynes was chief of the Construction Division in the Commerce Department for several years before transferral to NPA. He has been connected with the construction industry 25 years, has worked with Chas. H. Tompkins Co., Washington, N. P. Severn Co. of Chicago, and Corps of Engineers.

» IN ADDITION to the limitation order on construction which Mr. Creedon mentioned, there are quite a few others which affect you, shall I say, indirectly, because they apply to your suppliers. They restrict the amount of copper, zinc, aluminum, and tin which may be used in the production of, among other things, a lot of building material. Very seldom do these apply to the contractor directly, although there are a few exceptions. When you use copper or pipe according to the order, you are rated as a manufacturer. I am positive there is going to be a question on this subject later, so I won't go into much detail now.

The second point which I shall dwell on briefly is the construction outlook for 1951. The need for stockpiling aluminum and zinc and tin and a lot of other strategic materials renders our pre-Korean methods of estimating construction volume rather difficult. To oversimplify the situation, the amount of construction which can go forward presently—I am speaking of the period before this new steel and aluminum capacity comes into the picture; I am speaking of the amount of construction as of today—is going to be some part of a remainder. By that I mean this: About three months ago, the Military received an appropriation of almost 17 billion dollars in addition to already existing sizable appropriations. A few weeks ago, the President signed another appropriations bill mostly for military procurement, in the amount of almost 20 billion more. Soon after the papers reported that the President raised the sights to $140 billion for the next eighteen months, there has been no legislation on this subject.

Last night in this room, the radio mentioned the request for an appropriation of 3½ billions for the Navy. How fast can the Defense Department place contracts for these billions and how fast can these get down to the sub-supplier?

In the last six months of 1950, according to the General Accounting Office, the Military was spending on an average of 2 billion per month. This rate can and undoubtedly will be stepped up. What does this mean? For example—and, of course, I can only say if by next Christmas the Military will have spent a large part of this 40 to 50 billion dollars, it means that the civilian will have to do, roughly, without 20 per cent of his normal purchases. Now, the Military does not buy 20 per cent of glasses and rugs and radio sets, but a vastly larger percentage of the metals.

In addition to these direct requirements, you also have the requirements for stockpiles. I think the foregoing illustrates that any attempt to estimate construction volume, as would a market analyst, is rather fuzzy guesswork, but I think we can say that the private industrial volume of construction following the trend which began last July and which we have been following very closely and which was one billion dollars in 1950 will, according to present indications, be between one-half billion and two billion in 1951; that the volume of public industry as exemplified by the military arsenal and atomic energy construction, will jump from the level which it was in 1950, of a quarter of a billion, to around a billion dollars, and the direct military and naval construction will increase some 700 or 800 per cent.

The total dollar volume, taking into account the present prohibitions on commercial and amusement this year will probably be up to 2 or 3 billion dollars of last year's level of 28 billion, almost 27¾. In this category you can, of course, only say "probably." If you accept this forecast of a slight drop from total construction, nevertheless we are still in trouble, because the industrial plant construction takes two or three times as much steel per square foot as does the house, so despite the drop in housing—which, incidentally, hasn't dropped an awful lot yet—the housing starts this January were 87 thousand, which is an all-time high for January. A lot of this is following out commitments which were prepared prior to the institution of Regulation X, and the home-builders tell me that somehow, people who couldn't find a $500 deposit are now putting down $5,000. What is going to happen in February and March is difficult to say.

So far, the credit controls have not affected the housing problem, and at the risk of repetition, we have had an all-time high in housing starts in January. This has a little bearing in our change of the order concerning copper tubing.

Schools, Hospitals Needed

One remark on this total construction picture: Where we fell behind in the rate of construction of hospitals and schools, we didn't build them during the depression, because we didn't have the money; we didn't during the war because the materials were going to the Military, and we were too slow getting started between 1945 and 1950, so we are caught very shy of schools and hospitals.

You may have heard in *The New York Times*, the letter from Mr. Wilson to Governor Dewey concerning the freeways, and that probably he would not get the amount of steel required, because, in the same letter, it said, we need to give some special form of assistance to hospitals and schools. I think he might have added that the city water supply and a lot of other construction is also clamoring for increase.

As to point 2, as I mentioned earlier, NPA has had to issue certain limitation orders concerning aluminum, copper, tin and other metals. The difficulty with these is that the prohibition against one item causes shortages in another.

About a month and a half ago, because of the dire copper situation, we were forced to prohibit the use of copper plate and tubing in construction. But on finding that we are faced with a tremendous housing volume which has not slowed down, and in increase in industrial and an inability to step up with the necessary degree of rapidity, on galvanized steel pipe, we had to relax the copper order to permit the use of the hot and cold drawlines—not for radiant heating, however. I think it is fair to say in the immediate future, as the tempo of this defense spending steps up, it may indicate further cuts in the use of these nonferrous metals.



Mr. Creedon, right, and Mr. Haynes submitted to a lengthy questioning period at the convention session following their talks. Some misunderstandings were clarified for contractors, other problems taken under advisement by NPA.

Standardization, Substitutes

While we try to keep ourselves adjustable to the availability of substitutes, it keeps the contractor in a complete state of uncertainty—and I don't know if there is any real answer to that question. May I emphasize in a slightly different form what Mr. Creedon said with respect to your friends in the architectural profession and design. I think they would be well advised to spend a lot of time not only on economy of design but on what sounds very simple but isn't and what sounds very inconsequential but isn't—the simplification and a use of standard types and sizes.

We have had many talks with manufacturers. If you standardize, for example, and tell us we may make only 37 kinds of windows instead of 137 with, say, only 5 or 6 per cent of steel, our production would go up very rapidly. For example, the manufacturers of weather stripping and we ourselves are agreed that weather stripping is needed because of the fuel savings, but we can't afford a lush selection of types and sizes, and using this as an example, we hope to hit the happy medium where we don't have a great big faucet, with double heavy metal, but let's not go to ersatz cast-iron, which is no good in a year. We hope to hit a happy medium there simply by cutting corners; yet still trying to keep a small quality product.

And now a little bit on materials. I think we are in the worst shape on copper. Not precisely, but in rather familiar conversation, we say we can make aluminum and we can make steel, but you've got to dig copper, and zinc to the same extent. I think we are going to be in difficulty on copper and zinc items for some time to come. While there is an expansion in steel coming, it is not here today. You may inquire, since steel capacity was expanded 19 per cent in the last decade, aren't we in a much better position in 1951 than we were in 1940? Of course, on the opposite side of the ledger, we have an increase in population of 17 per cent. The housewives got more steel in the kitchen than before; more steel in automobiles; so on a per capita basis, our present supply is the same as 1940.

Just one word or two on priorities: So far, with minor exceptions, the uses of priorities have been confined to military procurement and very clearly defined governmental allied activities, allied to the defense effort. There are as yet no general priorities. I think it is fair to say that industrial expansion is making a very strong bid for preferential treatment, but it would be profitless for me to try to guess what it is, when that will occur, or whether it will occur. I have also mentioned Mr. Wilson's letter which has been made public, regarding schools and hospitals.

I might call attention to the fact that priorities are a little bit socialistic, substituting the judgment of man for what ordinarily happens in the markets of trade, and I think General Harrison and his top staff deserve a lot of credit for holding off on priorities just as long as they can. I am afraid, though, we are coming to it once more.

Priorities Problem

One more word on priorities. Too many people think a priority is something you get, like helping an old lady at a curb. It doesn't cost anybody anything, but in a scarce market, priority means taking something away from Joe and giving it to Jim, or moving it up in line ahead of people who have already been waiting a long time and now must wait longer. Too, priorities are something that need to be handled tenderly and cautiously.

May I tell you the two things I think are important? In thinking of how much can the civilian economy get, consider this 50 billion over our total economy of 300 billion. The Military presently has 50 billion. You can develop your own ratio as to what is going to be left until we increase this industrial expansion, we go to a greater economy, and we can add our Military on top, instead of what we've got to do—take it out of what we've got.

Economic Policy for Mobilization

By Wesley F. Rennie

Executive Director of the Committee for Economic Development

» THE American people now have a "job of work" to do vast in scope and crucial in significance. The task may not be measurable as yet in precise terms but its essential nature stands out much more clearly since the acts of Communist aggression in Korea. These acts demonstrated that Communist leaders were prepared on occasion to use naked force in accomplishing their aims of total domination. The free world has been put on guard. A time of testing has come. Our own survival and that of other free peoples is at stake.

Although there are many unresolved issues with respect both to domestic and to foreign policy these do not seriously obscure the major conclusion we as a nation have reached, namely that large-scale mobilization must be undertaken and sustained. The circumstances are without precedent in our national history, and so likewise must be many elements in our policy and behavior.

Mobilization Blueprint

The defense effort is primarily deterrent in its objective and differs markedly as to scope and timing from what it would have to be in the event of all-out war. The armed forces are to be built up promptly to a strength of 3,500,000 men. Many feel it essential to adopt a plan of universal military service and training which will involve all young men beginning at age 18. The over-all bill for defense in the fiscal year 1951-52 is estimated by the President at more than $52 billion, or approximately 19% of national income. Military equipment must be produced and at the same time the capacity to produce must be built up and maintained in a state of readiness. This roughly is the blueprint of a mobilizing U.S.A. We will be living in a new and unfamiliar atmosphere. We must apply ourselves diligently to the problems—stupendous but not insoluble—of keeping America strong in a full and complete sense.

For an indefinite term of years it will be true of us as when Nehemiah rebuilt the walls of Jerusalem that everyone must carry a *spear* in one hand and a *trowel* in the other.

The task is indeed twofold. A dual strength is required. Militarily the free world must be prepared to withstand aggression and must manifest the intention and capacity to act resolutely for such a purpose. At the same time we must continue to develop the social and economic strength out of which may flow improved living standards for all, and especially for those peoples most vulnerable to the specious propaganda of communism. Such is the basic strategy underlying mobilization. It is for the long pull. It offers a chance and a hope—although not a sure guarantee—of peace.

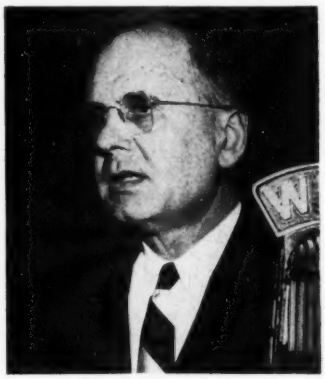
Economy Is First Line

In this situation the health and vitality of the American economy is of prime importance, both for the well-being of our people and as a means to the larger aims which command our allegiance and inspire our efforts. Our economic system is our first line of defense. It will remain the chief source of aid for peacetime recovery and development in many countries. On it rests largely the possibility of effective cooperation through the United Nations and other channels in grading up the living standards of the under-developed areas of the world. These are large and sobering responsibilities. Perhaps at no time in history has so much depended on the successful functioning of the economy of a single nation.

Such considerations place a spotlight on the important role to be played by business, labor and agriculture and by all of the social and religious institutions concerned with the preservation and enhancement of our free society. Inasmuch as I am representing one such institution, namely the Committee for Economic Development, let me describe it briefly and explain its approach to this subject.

The Committee for Economic Development comprises 130 leaders in business, industry and education. It is a private, non-partisan organization supported by voluntary contributions. It was formed in 1942 for the purpose of combating a postwar depression and of conducting research and formulating policy recommendations regarding the maintenance of high production and employment in a free society. It has developed and is using a unique procedure of collaboration between businessmen and scholars. Twenty-two policy statements have been prepared and issued and these reflect an integrated and positive economic philosophy. The Committee believes that the vitality and dynamic character of our free enterprise system can be preserved and strengthened, that boom-bust swings in the business cycle are not inevitable, that improved living standards can continue to be achieved for all of the people, and that the problems which stand in the way of the realization of these goals can best be met through intensive and objective study and through responsible action in the public interest.

CED research since the attack in Korea last June has focused on economic policy for a period of rearmament and general mobilization. Statements have been issued bearing the



Wesley F. Rennie

Prior to joining CED in 1949, Mr. Rennie was Secretary for International Affairs of the World's Committee of Young Men's Christian Associations. A close student of economic and social questions of national and international scope, he has been associated with the United Nations since its founding in 1945 as an accredited non-governmental observer. Formerly a resident of Seattle, he attended Wheaton and Greenville Colleges in Illinois, Hillsdale College in Michigan, and the University of Washington. He lives in New York City.

titles "Economic Policy for Rearmament" and "Paying for Defense." Studies are under way in the following areas: controls, federal taxes and expenditures, monetary and debt management, agriculture, and international economic relations.

Policy Recommended

A consensus has developed within CED that the following main lines of policy are essential in a balanced program of economic mobilization under conditions as they now exist and are likely to prevail for a long but indefinite period.

1. Primary and major reliance should be placed on the promotion of the growth of production and of productive capacity.

2. Concurrently, inflation should be combated by a consistent and comprehensive program, using largely those means which are aimed at dealing with basic causes.

3. The freedoms which are the basis of our strength and the object of our efforts should be preserved to the maximum degree despite the necessity of accepting in the national emergency some limitations and controls.

A fourth requirement although not officially formulated as yet emerges forcibly from previous CED studies and from the trend of present thinking, namely that economic aid should be extended to other nations and peoples where and when necessary to assist in building their strength as responsible partners of the free world, but limited in amount according to such essential criteria as probable effectiveness and our own available resources.

Let us examine briefly each of these requirements.

Production Secret Weapon

American capacity to produce, as someone has put it, is our real secret weapon. This was demonstrated in World War II when total output grew enormously despite restrictions and cutbacks in some lines. Unless and until we are engaged in all-out war we shall do well to combine the military build-up with the largest feasible support of our underlying industrial and civilian strength. A major diversion of resources to armament needs is, of course, an immediate necessity. But as stated in the December 1950 Report of the President's Council of Economic Advisers, "to serve these various needs (military and civilian) we must expand total production if we are to achieve optimum strength for the long pull." In this same report the Council states its belief that total output can be increased by about 25% over the next five years.

CED published a policy statement in June 1950 on the subject "How to Raise Real Wages." It deals with the basic factors involved in improving the living standards of workers, and states the conclusion that "the great increase in real wages during the last several generations has been made possible only by a large rise in production per man hour." Fifty years ago output per worker per man hour (in terms of 1949 dollars) was about 51¢. In 1949 it was $1.83. The rise in output per man hour is attributed to four principal causes:

1. There have been many revolutionary or near-revolutionary changes in processes of production.
2. Workers have been given much more capital—plant equipment and material—to help them produce.
3. There have been important advances in the health, training and skill of the labor force.
4. There have been great improvements in methods of management.

These are the broad lines along which the battle for increased productivity must be carried. In addition we should seek an increase in total output through the normal growth of the labor force and through the enlistment of many young people, older persons and others not now productively engaged. There will probably need to be an extension of working hours per week. Studies need to be made of, and policies adopted looking toward, the best utilization of the labor force; the removal of restrictive practices; the build-up of plant capacity; the possible reduction of import barriers; the use of funds for research; tax policy as it relates to expansion; and other aspects of the production problem.

Inflation Specter

In spite of everything which can be done to increase production there will remain an imbalance between supply and demand which will generate powerful inflationary tendencies. Inflation must be recognized as one of the most, if not the most, portentous internal enemy. It is imperative to control it. It should be regarded with as much seriousness as a severe depression even though its impact may be far less dramatic and its evils somewhat sugar-coated.

The Program Committee of CED has recently issued a statement entitled "Conditions Necessary for Effective Price-Wage Controls." Here are some of the highlights of this document.

It is pointed out that for the past several months the American economy has been under strong inflationary pressures. The main source has been advance buying by individuals and businesses seeking to protect themselves against expected higher prices and shortages. This advance buying and the growing requirements of the defense program, added to the normal needs of our economy, have increased demand for goods and services beyond the supply immediately available. The resulting spiral of increasing prices and wage rates seriously threatens the stability of the economy.

CED Recommendations

In order to check the price-wage spiral, our government has adopted a set of direct controls designed to stabilize prices and wages. This decision having been taken, it is now imperative that we do everything within our power to make these price and wage controls work as effectively as possible. Price and wage controls will not by themselves stem the tide of inflation. They deal with symptoms rather than with underlying causes. They can be helpful provided other steps are taken to reduce the real causes of inflation. They will be harmful if we are lulled into a false sense of security and fail to take the other steps that are necessary.

It is obvious that the solution which would be most palatable would be a substantial increase in production, but as already stated, an increase in production is not enough. Strong measures will be necessary to hold down demand. The program will affect the activities of government, business and of private individuals. Four lines of action are recommended.

1. *Drastic steps should be taken to reduce all government expenditures not clearly essential to the defense effort.* The Federal Budget for 1951-52 contains large sums for which the immediate need has not been demonstrated. Every expenditure should be

required to pass the test of necessity in the present emergency. Military programs as well as other parts of the budget should be rigorously screened to hold down the waste of materials, manpower and money that so often develops in a large rearmament drive.

The expenditures of state and local governments are about as large as the non-military expenditures of the Federal Government. Maximum economy is now a matter of national concern and necessity. Many state and local expenditures can and should be postponed.

2. *Taxes should be raised sharply and promptly, to restrain consumers' expenditures as well as to increase revenues.* The goal should be a substantial surplus in the early part of calendar 1951 and at least a balanced cash budget in the latter part. The inflationary pressure of 1950 arose in spite of a federal cash budget surplus. If we now move into deficits we shall add a new powerful inflationary force to the forces that have been at work since last summer.

In order to be most effective in reducing inflationary pressures the tax increases must be of a kind that will restrain consumer expenditures rather than saving. This means higher individual income taxes in all brackets and higher and more extensive excise taxes.

3. *The expansion of bank credit should be checked.* The $9 billion increase in bank credit to private and local government borrowers in the second half of 1950 was certainly a major factor in the inflation of that period. There can be no reasonable basis for confidence in the control of inflationary pressure if the expansion of bank credit and the resulting increase in the amount of money is not brought under control.

The Federal Reserve System, using its powers over the availability and supply of the banking system's reserves, can control the expansion of bank credit. It is of the utmost importance that this power to check credit expansion be used to reduce inflationary pressure. This will require a modification of the present policy of using the government's monetary powers to maintain a stable market for Federal Government securities at low interest rates. The costs of an anti-inflationary monetary policy in the form of higher interest burden on the federal debt are commonly exaggerated and in any case would be small by comparison with the costs of greater inflation.

In view of the present differences of opinion about monetary policy and debt management and the need for greater public understanding of the issues involved, Congress should without delay establish a National Monetary Commission to make recommendations on the policies to be followed in the control of money and credit during the defense emergency.

4. *A national program to encourage savings should be inaugurated.* Anti-inflationary policy is an effort to keep the community as a whole from trying to buy more goods and services than are available. The government has certain clear responsibilities in this effort. But the action of private individuals can be decisive for the success or failure of the effort. As members of a free society engaged in a struggle for survival each of us has a responsibility to assist—by saving.

Everyone's Responsibility

In the final analysis the burden of defense falls upon the great mass of individuals. Some groups may be able to achieve a more favorable position than others, but in the main the burden must fall on all the people. In a country which enjoys the highest standard of living in the world, the burdens of the projected defense program can be borne without serious hardship. However, if each of us tries to escape from the necessary common burden, by buying as much as he can as fast as he can, we shall all suffer the unnecessary burden of inflation.

From government we need a national policy beyond price and wage controls. We need a policy that will convince our people that our government is facing the realities of the situation,—that all of the available means will be used to deal with the basic forces of inflation, so that direct price and wage controls will have a reasonable chance of success. We can then proceed first to live with controls and later, as production rises and demand is stabilized, to live without them.

In December 1949 CED issued a policy statement entitled, "National Security and Our Individual Freedom." This statement posed the crucial problem of working out an acceptable balance between the requirements of national security and those of maintaining the freedoms we seek to defend. Although adequate security is essential to protect our freedoms the program aimed at security raises new threats to our freedoms and to our way of life. The security program is a necessary and at the same time a dangerous force in our society. Under it there is bound to be a great increase in the role of the military in our government, a great increase in bureaucracy, and expanding dominance of government over industry and an increasing interference with the individual freedoms.

Protect our Freedom

Neither national security nor individual freedom can be absolute. Both can be increased by improved efficiency and balance within the security program. The securing of such an acceptable balance is of prime importance.

The statement made recommendations designed to accomplish such an objective. The importance of civilian supremacy was emphasized and it was recommended that the civilian agencies designed to assist the President be greatly strengthened. It was asserted that only an alert and responsible citizenry can ensure that adequate security is obtained without the loss of essential freedom.

The thesis of this policy statement is highly relevant in the stage of mobilization upon which we are now entering. Some action has been taken in the direction of its recommendations, including the appointment of the Commission on Internal Security and Individual Rights. But much remains to be done. Every citizen and every voluntary organization has a precious and vital stake in this matter.

Several of our traditional freedoms are being sharply curtailed through the operation of policies already mentioned and which are generally accepted as necessary. This should not, however, entail a retreat from or a watering-down of our loyalty to *freedom* itself. No other ideal so well sums up the American idea and goal. Freedom is precisely that which we are ready to defend to the death, as did our forefathers. It is what we hope to see extended to other peoples. In the very midst of the voluntary restrictions we choose to accept let us launch a new and positive crusade for a deeper understanding of freedom, a heightened appreciation of its values, an effective interpretation of it to the world, and a demonstration that love

of freedom is indeed the controlling motive of our nation.

The convening of the 82nd Congress marked the beginning of a new stage in the review and realignment of our foreign economic policy. The issues are complex and crucial. It is not appropriate for me to set forth concrete proposals until our committee has completed work on its present study in this field. However, let's "look at the record" briefly as background for considering the general course national action should take.

We should remind ourselves of the shattered condition of the world at the end of World War II only some five short years ago. I was in Europe in the summer of 1946 and had an opportunity to observe the damage which had been done and the sad spectacle of the weakened, confused, divided and torn condition of many countries. No more vivid description has been given than that painted by Churchill in an address delivered in Zurich in September 1946: "Some of the smaller states have indeed made a good recovery, but over wide areas are a vast, quivering mass of tormented, hungry, careworn and bewildered human beings, who wait at the ruins of their cities and their homes and scan the dark horizons for the approach of some new form of tyranny or terror."

Life did go on but there was little hope or faith. There were over-hanging threats of further economic disaster, political chaos and even then the fear that Europe might become the arena for a new conflict.

Marshall Plan Praised

Then came a light to brighten the dark horizons,—from the west, not the east. This light was the Marshall Plan, which I am sure history will record as one of the most generous and statesmanlike actions ever undertaken by a great nation.

The story of world recovery both east and west in areas aided by the United States has been told many times and is a familiar one. The Gray Report made to the President in November 1950 puts it this way:

> "By the middle of 1950 it appeared that the productive ability of most Western European countries and of Japan either was already sufficient or would soon become sufficient to make unnecessary a net addition to their own productive resources from outside aid, and that further grants from the United States would become unnecessary by 1952 or even earlier."

American foreign aid from mid-1945 to mid-1950 reached the net total of $26 billion, of which approximately two-thirds was in the form of outright grants. The Point Four program aimed at helping the underdeveloped areas of the world which had not enjoyed the relative recovery of the more industrialized countries began in the fall of 1950 under an appropriation for the first year in the amount of $34,500,000, of which $12,000,000 is being expended through the United Nations.

The results accomplished by the programs already executed warrant the conclusion that they have been remarkably successful. They should be redrawn and continued in some form but their nature and scope for the mobilization period require an examination not less searching than was given to the European recovery program when a high level of thinking and debate was reached in the executive and legislative branches of the government and in public forums throughout the country.

Hoffman Appraises Aid

In such an examination the lessons to be drawn from the operation of the Marshall Plan and ECA should be given full weight. CED is proud of the imaginative and practical leadership given in that enterprise by Paul Hoffman, first chairman of our Committee. Mr. Hoffman has prepared his own appraisal in book form, under the title "Waging the Peace," to be published in April. An article drawn from this book appears in the February 5th issue of *Life* magazine. In it he states:

> "We can prevent war—and wage effective peace—only by a positive program that goes beyond more containment. It calls for wresting the initiative from the USSR not only by anticipating its moves, and thus thwarting them, but even more importantly by eradicating the social and political and economic conditions on which Communism thrives. In this respect the Marshall Plan has been and remains the pilot plant and proving ground for an American foreign policy that is firm, constructive and far-reaching."

He then suggests that a reasonable estimate of the cost of extending economic aid to those countries whose development is important to the security of the U. S. and the free world would be $2 billion, to which he would add $650 million for political and informational activities. Surely we would agree with him that "if these expenditures help to bring about successful resistance to the Kremlin's internal aggression, they must be regarded as one of the best-paying investments ever made by any people, any time, anywhere."

Mr. Hoffman's conclusions as to ECA experience and as to foreign economic policy for the future are illustrative of the type of thinking we need at this juncture.

These are some of the general elements of a strategy for mobilization in the four areas of increasing production, combating inflation, maintaining freedoms, and aiding other nations.

Popular Support Needed

The successful development of such a strategy and its prosecution for a sustained period will require the full understanding and support of the American people.

If this were a totalitarian country, those in charge of thought control could activate without interference the entire apparatus of education and public information. But as has been aptly demonstrated, such a procedure does not inform and does not educate. Fortunately we are a free people with free institutions. Our reliance must be on the voluntary activity of our schools, our churches, the press and radio, farm organizations, business and trade associations, and the many other instrumentalities of conveying information and stimulating discussion.

Spiritual Character Key

In the last analysis our security depends on the moral and spiritual character of our people. General Eisenhower states it thus, "No matter how much planning, how much wisdom may go into planning whether it be . . . armed invasion of a continent or a campaign to reduce the inroads of disease, the measure of its success always will be the spirit and mettle of the individuals engaged in its execution."

The spirit and mettle of the American people are now about to be tested to the core. Each must do his part to assure survival and progress toward the highest aims of a free society.

Can Americans Take It?

• First Major Public Address on Civil Defense

By Millard F. Caldwell, Jr.

Administrator, Federal Civil Defense Administration

(The following address was broadcast over a national network at the 32nd A.G.C. annual convention.)

» I AM delighted to be here and to make this my first exception to a rule of "No speeches" in the beginning of my work. I make that exception because I recognize the importance of this group and the vital part you will have to play in the future of civil defense.

I should like to say at the beginning that this is the first time I ever held a job in the usual sense, and the first time I have ever felt the necessity for being careful of what I said.

In the past, I have always been entirely uninhibited and expressed my views about any or everything freely. However, as I talk about the question of civil defense, I now have a feeling that the State Department is looking over my shoulder, with the Department of Defense nudging my elbow, and even the President with an ear cocked to see that I stay somewhere within the realm of sensible statements and a manifestation of some degree of saneness and soundness.

America stands before the world today in a fighting posture.

For months now American troops and their allies in the United Nations' forces have waged a bitter and costly battle in Korea.

Positive Steps Taken

During the past few months the nation has taken positive steps to gear its economy and manpower into the mobilization program. We have stepped up our orders for defense materials. We have increased the size of our armed forces.

There now can be little room for doubt on either side of the Iron Curtain that Americans, as a people, are facing up to their responsibilities. No one can question our motives in mobilizing against the threat of war and aggression. It has taken time to make up our minds and get into action, but steps like these require time and thought. We must not muster a "broomstick army" to fight an atomic war.

There remains one question in the minds of people on both sides of the Iron Curtain today. That question is a simple one, but a big one. The question is, "Can the American people take it? Can they fight back, after a large-scale atomic attack on their cities and homes?"

Ask that question of anyone you meet on the street today and the greater percentage will reply, perhaps with little thought, that of course Americans can take it. I think we can! But what proof do we have? We cannot be sure how they will respond to attack.

British Can Take It

Most of our allies and their homelands took a terrible beating during the recent wars. Most of them endured it very well. From my recent visit to England I have come away with the conviction that the British people will withstand any type of enemy attack that might be thrown against them—and still fight back.

The British civil defense planners, I am convinced, have taken the correct measure of British courage and morale. Based on what the English people went through during the last war, they say they can take an atomic attack as they did the blitz.

I found a hard realism in England about what may happen to the British Isles in another war. There was no fluttering of the hands, or talk of futility. As a practical example of that realism—one of the exercises at the Civil Defense Staff College at Sunningdale poses, as a test problem, the dropping of as many as eight atomic bombs on greater London. Perhaps they would never get that many, but they are preparing themselves mentally and physically to cope with all the death and destruction that would result from an attack of that size on their major city.

I want you to keep in mind that figure of eight atomic bombs on one city, when you hear the defeatists in this country say that it would be impossible for Americans, as a people,



Civil Defense Administrator Millard Caldwell, right, chats with A.G.C. Managing Director H. E. Foreman.

Mr. Caldwell was governor of Florida, serving the term from 1945 to 1949. In 1933, he was elected to the House of Representatives of the United States from the 3rd Florida District, and served until 1941, when he voluntarily retired to resume the practice of law in Milton and Tallahassee. He is a member of the law firm of Caldwell, Parker, Foster and Wigginton.

He was a delegate to the Interparliamentary Union at The Hague in 1938 and at Oslo in 1939. He is a member of the Executive Council at the American Group, Interparliamentary Union. He was chairman of the National Governors Conference in 1946-47, and president of the Council of State Governments during the same period.

to stand up under one or two bombs. That kind of talk is idiocy of the first order.

The people of the German cities took a far greater pounding than the British, and showed that they could stand up to it. That was equally true of the people of Tokyo, who suffered the fire raids, and of the survivors of Nagasaki and Hiroshima. All of those people were "blooded" under actual combat conditions. There may have been signs of panic and serious disorganization, but when it was over the people had resisted fairly well. They know they can do it again if they must.

Russians Can Take It

On the other side of the Iron Curtain we should remember that the Russian cities, and the Russian people themselves, suffered brutally at the hands of the German war machine without quitting. When the Russian leaders today take the pulse of their people, I am certain they make note of the fact that their people suffered but fought back, not once but many times, throughout the long years of World War II.

Knowing all this, there is one question which the American people—and that means every single one of us—must search their minds and hearts to answer honestly. There are those who make light of the process of "soul searching." But frankly, I believe that every American citizen had better look into his own mind and his own heart right now and ask himself, "Would I have the courage to stand up under an atomic attack if it came tonight?"

And ask yourself at the same time—"When will I face the facts about another war and what it may do to me and my family?" There is no time to bury ourselves in the sport pages, or the comic books, or the cookbooks, in the hope that we won't have to answer those questions. Don't look around and expect some one else to answer them for you.

What Russia Can Do

We must realize that we are up against the grimmest problem we have ever faced, or may ever face, as individuals and as a nation. There will be no one around to "wet nurse" us. We can't count on any one to lead us by the hands, if something happens. We've got to learn to save ourselves, and we've got to learn it fast.

When I talk about facing the facts—here is exactly what I mean:

1. The Russians have the planes and the bombs to deliver an atomic attack, in force, on a dozen or more of our major cities at any time.

2. There is nothing we can do to stop such an attack. General Hoyt Vandenberg of the Air Force has said that at least 70% of an attacking force would get through.

3. Such an attack could be made on any American city, at any time, with little or no warning. As our radar and warning systems improve, it may be that we could count on as much as a half-hour of warning but right now we can hope for one or two minutes at best.

That means just this to you as an individual: to save your life and the lives of your family, you may have only 100 seconds to act, and to act wisely. There will be no time to ask advice—no time to sit around waiting for someone to take you by the hand. You will either do the things you should do, or be numbered among the injured or the dead.

4. Wherever you live in this country, you may face greater personal danger as a civilian than our men in uniform. Should a mass atomic attack come—and I remind you it could come tomorrow—there would be many times more civilian casualties, in a few hours, than our military forces have suffered thus far in any or all of our wars as a nation. You must realize that your own back yard may be the next front line.

Atom Bomb Not All

5. The enemy is capable of causing death and destruction in our cities by means other than atomic warfare. There is every reason to believe that if an attack should come, it would be a smashing all-out blow designed to cripple us as a nation within a few hours, if possible.

Among the weapons which the enemy has in his arsenal today—and is capable of delivering in quantity—are several forms of biological attack. In addition to germ warfare, we could be hit at the same time by nerve gases. Nor can we overlook the sinister effects of mass sabotage.

6. You must realize that survival is only the first test that you would have to undergo in an atomic attack.

What would take courage, or, to put it more simply, guts, would be the ability to conduct yourself sensibly in the face of the death and destruction that you would find all about you. One of the main reasons for the casualty figures at Nagasaki and Hiroshima was the panic caused by individual reactions to the horrors of the bombs' effects. The sight of the casualties was terrifying, and their number was appalling.

Once you come out of your shelter, wherever that might be, your first responsibility would be to keep your head—and to get to work. It would be in those few minutes after an attack that panic could sweep an area like a forest fire in a high wind.

If you have civil defense duties, your job is to carry them out at any cost. Those people who do not belong to the Civil Defense Corps would have the responsibility of taking care of themselves and their own needs. And most important—they would have to stay where they were.

No Escape to Hills

Except in cases of imminent danger from fire, your family certainly would be much better off at home than anywhere else. You simply could not "take to the hills" like panicked sheep. If you started it, others would follow. That would choke off the civil defense rescue efforts and create an impossible relief situation which could kill more people than the enemy bombs.

Sit back for a few moments and think those things over.

Don't take comfort from the fact that you may happen to live outside of a metropolitan area. Don't imagine that you will have time to drive out in the country to stay with Aunt Susie in the event of an emergency. Any bomb that drops in these United States will affect you in some manner. You cannot hide from an enemy attack.

You might be right in believing that no one would waste an atomic bomb on your own particular town or suburb. The enemy counts on your feeling just that way, because then you will be wide open for attack by biological warfare, or chemical warfare, or the over-all weapon of psychological warfare.

I have not asked you pertinent questions to alarm you. They are questions that you must answer if you and your family, your city, and your country are to survive in another war.

We know that a mass assault on our cities would bring death and de-

struction. We know that the purpose of that assault would be to break the back of our war effort and our will to fight. If the enemy were successful in those objectives, then we would have lost the war then and there.

Our national will to survive and to fight back is your responsibility. The measure of our national security is your individual reaction to danger. How well can you stand up under an attack if it should come?

I have told you simply and directly the facts that you have to face. I want to repeat them here so that there can be no misunderstanding of their import.

1. The Russians are capable of delivering, today, an atomic attack in force on a dozen or more of our major cities.

2. There is nothing we can do to stop them.

3. The attack may come with no warning and you will have to act quickly and wisely to save your own lives and the lives of your families.

4. You, as civilians, probably face greater danger than our soldiers in uniform. Your own back yard will be the next front line if war comes.

5. The enemy, in addition to causing death and destruction by atomic warfare, can deal crippling blows with biological and gas warfare and by sabotage.

6. If you are fortunate enough to survive an attack, your job has just begun.

You have a right to ask now, "What can I do about it? What is this country doing about it?"

Read Up on Civil Defense

Early last September the National Security Resources Board issued the national plan for civil defense. That plan was the result of years of consultation and study by some 2,000 experts in this country and abroad. Under this plan your states and your cities should be organizing as soundly and as rapidly as possible. That is the organizational side of the picture.

Early in November of last year the Resources Board issued the first of a series of public information booklets on civil defense against modern weapons. That booklet, called "Survival Under Atomic Attack," spelled out in simple, direct language what you should and should not do in the case of atomic attack. Within the next month the sales of that booklet, through private and government channels, will near the ten million mark.

The 32 pages of this booklet have been widely reproduced in the newspapers and on television and radio. If you are among the millions who still have not read this booklet, I remind you that it is your duty to get it and learn its lessons.

"Alert" Card Program

The second part of our program for the education of the individual is a civil defense "alert" card. This simple card comes in two sizes; one to fit in your pocket and the other to put up in your home or office.

Within the next few months several million of these cards will be printed and distributed to the states. The state civil defense directors will then distribute them to the homes in their critical target areas. As rapidly as government funds are available, either at the state or local level, we are asking further distribution of the card. Eventually every home in critical target areas will be covered.

The civil defense alert card is easy to read. But unless it is studied by every American, we will lose thousands of lives in the event of attack. The cards tell you what the air raid warning signals are, and precisely what to do and where to go when you hear them—whether you are at home, at work, on the streets, in school, or on a bus.

I can say without exaggeration that what you learn from these cards and booklets may be vitally important to you. Once your family knows how to act quickly, the next step is to survey your house or your office building for adequate shelter.

Obviously you must take a calculated risk. There are few shelters that are absolutely atomic bomb-proof in the country today. Beyond a half mile, however, any of our reinforced concrete buildings, the basement of your home, or a back yard shelter should provide fair protection against the blast, the heat, and the radiation from an atomic bomb.

Early last December this Administration issued the air raid warning signals and urged that every city in the country install a public warning system. In order to train the public to act sensibly in the event of attack, we urged also that every city carry out a regular series of public tests of its warning signal equipment.

The purpose of those tests was not to determine whether the sirens would work for a few seconds at a time. The public must go through actual drills, as many of our school children now are doing. Only in this fashion will people know how to behave, and what to do, in the few minutes they may have before an attack.

I cannot urge too strongly that repeated public air-raid tests be held in every city in the country during the next few months. Once the local civil defense authorities are satisfied that their people are trained in what to do, then these tests can be stretched out to perhaps a once-a-month basis. Until then weekly public air raid drills are needed, with whatever equipment can be improvised locally.

Our agency is releasing the second of a series of public educational booklets. This one will be called "What You Should Know About Biological Warfare." Almost simultaneously there will be released the first official civil defense film based on the first public information booklet entitled "Survival Under Atomic Attack." Within a few weeks after its release this film will be widely available through every film dealer in the country in 16 mm, black and white, with sound. If I were you, that is one film I would arrange to see.

As rapidly as they can be produced, our Administration will release additional booklets and films on other important aspects of civil defense. These booklets are being written for you, the American citizen. Don't wait until someone hands you one, and don't expect someone else to do your reading for you. These booklets and these films are "Learn and Live" material.

Personnel Problem

We are not, as a nation, making the progress we badly need in civil defense. The public is not yet inclined to face the facts. So, I go back to the question I asked earlier, "Do we have the common sense and the courage to recognize the facts and do something about them?"

One reason why we are not making as much progress as we should make in civil defense is the simple matter of personnel. You cannot run this kind of show at the federal level without the best people you can find. I have a particular purpose in referring to that subject matter with this group. Let me give you a few illustrations of one thing we have to contend with, and this is one of several.

One of our offices includes the Divisions of Police, Fire, Wardens, Engineering Services, and a number

ber of other important parts of civil defense. We need a man capable of handling a bigger business than any individual has ever handled in private business in this country. He cannot be a fuddy-duddy, he cannot be a theorist, because a theorist can't talk to the hard-bitten Fire Department people in Boston or in San Francisco or in the smaller towns of this country. He has to be a good, straight-thinking, tough, hard-hitting individual who can take the police people in this country and show them how to run a show under a major attack. He has to be the kind of man who can run an organization of wardens involving several million people; and we are not coming up with that kind of people. We are not finding them.

Asks Personnel Aid

Therefore, I charge you with the responsibility of giving a little thought to this problem and giving us some names of people who have broad-gauge minds, broad experience, a willingness to make a sacrifice for this country of ours. We need them in several fields. We have been successful in several fields. We have gotten some great people down there. But the market is a little bit tight right now. Mr. Wilson and several other national groups are in the same market as we are. I want you to come up with some names, and I want your cooperation in doing this job. You will have a big part to play.

Need Construction Know-How

We are veering our thinking a little bit on the shelter program. There is not enough labor, there is not enough steel, there is not enough concrete, or enough time in this country of ours to build deep community shelters. But with the know-how which you possess in your organization, we can identify in every community those areas, whether in the basement or whether they are rooms upstairs in all of the buildings, that are relatively safe, and with your know-how and your help, we can take other areas and make them relatively safe by shoring them up and strengthening them and adding the necessary means of egress and ingress. That is where the emphasis must come, in making the most of what we have now, doing it quickly and doing it intelligently, and in a good, tough, hard-boiled business way.

The Current Program of the Corps of Engineers

By Major General Lewis A. Pick
Chief of Engineers, Department of the Army

» IT IS indeed a pleasure to meet with you today. It is my first time to have this privilege, for the press of official duties prevented my joining you in San Francisco last year. Yet I have no feeling of coming before you as a stranger. The Associated General Contractors and the Corps of Engineers have too long had close and mutually satisfactory relations for us not to be old friends. I am glad to be here.

I also am quite pleased that Rear Admiral Jelley, Chief of the Navy's Bureau of Yards and Docks, is to appear on the program today. The Bureau of Yards and Docks has a responsibility to the Navy Department comparable to that which the Corps of Engineers has to the Army and Air Force. Between our services there exists the most amiable cooperation. We work together on many mutual problems; and we, alike, are determined that the present urgent job shall be accomplished — with both speed and efficiency.

I wish that on this, my first appearance before you, the dark cloud of a national emergency did not hover over our discussions. It would be a far happier occasion if we could devote our full time and resources to the constructive pursuits of peace.

$2.4 Billion Military Work

But the national emergency is a reality—a deep threat to the days and years ahead. Throughout the country there is a great sense of urgency. The pace of mobilization is quickening, and quickening rapidly. You—as builders and contractors closely allied in your work with the military establishment—are properly concerned. You are certainly entitled to know as much as possible about plans and requirements of our current program. Consequently, I should like to touch upon the high points of this phase of our work—upon certain plans, problems and procedures, as are related directly to the Corps of Engineers.

The full scope of the military construction program cannot at this time be forecast accurately. The anticipated increase in the work load has trebled in recent months. Currently, the work authorized through the fiscal year 1951—and for which funds have been made available for both Army and Air Force construction — totals $2.4 billion.

It is inevitable that this construction will make a forcible impact upon our national economy. It is fast becoming a challenge to the country's engineers and contractors, and will demand, increasingly, a contribution from the entire construction industry.

Happily, the Corps of Engineers



Major General Lewis A. Pick

General Pick is a native of Brookneal, Virginia, attended Virginia Polytechnic Institute and served in World War I, being honorably discharged as a captain. In 1920 he entered the Corps of Engineers as a second lieutenant, and was advanced to captain the same day. During World War II he gained fame for construction and operation of the Ledo Road, often called "Pick's Pike." Afterwards he contributed notably to plans for development of the Missouri River Basin. General Pick was appointed Chief of Engineers March 1, 1949, receiving the permanent rank of major general.

and the country's contractors will not have to start from scratch. We have been working together for many years—on military problems in time of war, and on the great civil works projects in time of peace.

And people who know each other—people who have worked with each other—make a fine team when it comes to getting things done. I can assure you that the Corps of Engineers is going to handle its work on time and well. We are going to see that clear ground rules—under which we all must operate—are established and recognized.

The greatest asset the Corps of Engineers has in meeting the emergency requirements is its far-flung field organization. Thanks—to a great degree—to our civil works functions, we maintain an organization capable of meeting any job which lies ahead.

Decentralized Awards

You are familiar with the way we are organized on a nation-wide basis . . . the way we function through divisions and districts. You also are familiar with the manner in which authority is decentralized to accomplish our large peacetime civil works program. Well, under the emergency military program, authority is being decentralized also. Under authority which I already have delegated, a large majority of our 54 divisions and districts are currently engaged in military construction. The remainder are available for such work as the need arises. And new districts can be added—in both this country and overseas—as the work load dictates.

The magnitude of our enlarged program makes it highly imperative that the letting of contracts be accomplished efficiently, effectively, and to the best interest of the government. Consequently, last December 28th, I issued a directive to appropriate members of my organization, delegating certain authorities they previously did not have.

In line with this directive, our Division and District Engineers—and the Assistant Chief of Engineers for Military Construction—now have authority to approve the award of negotiated contracts for construction up to $15,000,000 in value.

In addition, I have given my Division and District Engineers authority to approve awards of architect-engineer contracts up to $500,000. For all contracts—within their approval authority—our Division and District Engineers are authorized to select their contractors without reference to my office.

Contract Policy

In carrying out the authority invested in them under my directive of last December, our Division and District Engineers have been instructed to observe the following principles in determining the type of contracts to be used:

1) When plans and specifications are complete enough to permit lump-sum bidding, they will decide whether to negotiate or advertise on the basis of the time element involved.

2) Where the work can be defined by partial plans and specifications that are not sufficiently complete to permit formal advertising, negotiated lump-sum or unit-price contracts will be used—if practical—in lieu of cost-plus-a-fixed-fee contracts.

3) Cost-plus-a-fixed-fee contracts will be used when the completion date is such that we must start planning and building at the same time.

4) When the project is located offshore, in areas where construction experience is lacking, or otherwise of such a nature that makes it impracticable to estimate costs, the cost-plus-a-fixed-fee type of contract will be used.

5) Any contract to be negotiated on a fixed-price basis will generally be accomplished by soliciting proposals from such qualified contractors as may be deemed necessary to insure effective competition, consistent with meeting the required completion date.

6) If letter orders will serve to expedite the completion of a contract let by negotiation, the letter orders will be issued in the first instance.

7) All types of contracts will contain adequate requirements for maintaining sufficient plant, personnel, extra shifts and overtime to insure completion within the specified time limits.

Selection of Contractors

The following principles will govern the selection of contractors when the element of competition is necessarily lacking:

1) The contractors must be fully capable of accomplishing the required design or construction work.

2) The contractor should be located in the general geographical area in which the work is to be performed. The guiding principle set for the Division and District Engineers in determining the size of the geographical area is to make it large enough to provide a reasonable choice of contractors capable of handling the project. Unusually large or complicated projects thus generally will require consideration of firms within a large geographical area.

3) Everything possible will be done to avoid overloading one firm. In this line, I should add that it is—and will continue to be—our policy to utilize the smaller contractors where appropriate. The smaller contractors of an area can—and should—contribute substantially to the program.

At the present time, the Chief of Engineers must determine when a cost-plus-a-fixed-fee contract is required. This applies to all types of contracts—construction, procurement, and architect-engineer. And, you know, there are certain circumstances when such a contract must be used. For example, if the completion date is such that we must start building and planning at the same time, there is no answer other than a cost-plus-a-fixed-fee contract. The ordnance rehabilitation program is an example.

"DO" Orders and Materials

Perhaps uppermost in the minds of most of you at this time are questions pertaining to the system of priorities and allocations instituted under the Defense Production Act of 1950. Already, when you try to buy equipment or materials, you are asked if you have a defense order. This "DO" is becoming increasingly essential to the conduct of your business.

Perhaps you will better visualize—and understand—the application of defense orders if I tell you something of the way they are handled in my office.

I have received two definite authorities regarding the use of defense orders and dollar limitations, as related to military construction. First, I have authority to apply defense order ratings to military construction for the benefit of both the Army and Air Force. This authority I have re-delegated to our various district offices. They, in turn, give to the contractors the right to apply a defense order rating to the materials and supplies necessary to complete a specific contract. At present, we are utilizing "Defense Order No. 22" for military construction. The number 22 is a *category*, rather than a relative priority number. It is applicable to construction materials, as set forth in the NPA regulations. Construction priority, I

might add, covers almost any building material, except the mineral aggregates which go into concrete.

Second, my office has received specific dollar ceilings in bulk amounts. These ceilings do not concern a contractor particularly; but they are used by us to gauge the amount of material that will be consumed by our programs. Only the simplest reports are required—a tabulation of the dollar amounts of priority applied, and a record on the contractor's part regarding the orders he has rated.

To date, the present priority system has been effective in obtaining necessary materials. Whether the over-all effect will later necessitate certain changes (for example, the instituting of a system of priorities within priorities), I can't at this point say. However, for the most part, suppliers of materials have been very cooperative in supplying necessary items on time. The majority of the relatively few delays that have occurred in securing materials have been due primarily to the failure of the contractor to place his order early enough—or to set a reasonable schedule for their delivery.

Problems in Equipment

In the field of contract and construction equipment, we have more difficulty. Defense Order No. 22 is not extendable to contractors for the purchase of equipment for their own plant.

However, we are endeavoring to obtain authority to apply a very small amount of priority ceilings to the procurement by contractors of construction equipment.

In this line, we anticipate that one per cent of the total value of our contracts will secure relief for the contractor when some specific item of equipment is preventing the completion of the work. But remember, I am talking about *construction equipment only*—equipment to be used by the contractor on the job—and not about machinery that is incorporated into a finished building.

A number of projects are, of course, located overseas. On certain of these projects it has been neither possible nor feasible to ship used construction plants. Consequently, in a few cases, new construction equipment has been procured by the contractor through the use of a priority rating. This equipment will eventually become the property of the government. However, it is our sincere desire to avoid this method of procurement. In fact, one of the factors to which I give serious consideration in the selection of contractors for large projects is the amount of equipment which they own and have readily available to place upon the project.

A word regarding third party rental of equipment. By this type of agreement, I mean cases where a cost-plus-fixed-fee contractor or the District Engineer rents equipment directly from an equipment contractor—or from a dealer—and supplies it to a specific project. Such agreements contain a recapture provision. Under this provision, the government takes possession of the equipment when the rental period is sufficiently long to make the total payments approach the purchase price of the equipment.

We do not consider this procedure desirable, since it tends to put us back in the equipment business. In instances where we are forced to use third party rental agreements for short periods of time, we will avoid recapture in so far as possible.

Relief from Delays

We of the Corps of Engineers are acutely aware that, at best, a system of priorities and allocations must necessarily work added hardships upon you, as contractors. However, we all know, alike, that such a system is both essential to a national emergency and basically fair.

Yet there are certain points that, perhaps, can be modified. For example, the "Time Extensions" paragraph of the "Delays-Damage" clause in construction contracts.

Inevitably, the operation of the priorities and allocation system will make uncertain the dates on which contractors can expect delivery of materials necessary to the completion of a project. These delays will be caused by no fault or negligence of either you or your supplier. Consequently, we have asked permission of higher authority to amend the "Time Extensions" paragraph. Under the amendment, such delays would be considered as caused by "acts of the government," and therefore excusable as such.

This requested amendment—if executed—will bring you certain relief. We, of course, expect to find evidence of this relief in substantially lower bids.

As members of an industry faced with a greatly increased work load, you properly are concerned regarding personnel. Frankly, it is a serious question. The increased work load of the Corps of Engineers naturally demands an increase in engineer personnel. The ratio of non-regular to regular army officers will be increased from about three to one to slightly less than 6 to 1. However, with exception of a few special cases, only junior officers are currently being called.

The civilian organization of the Corps has not increased percentage-wise nearly as much as has the uniformed forces. However, the military construction load, together with our continuing civil works responsibilities, has brought increases in civilian employment, and will continue to do so.

A.G.C. Affiliation "Magnificent"

Should the emergency continue there will be a need for additional Engineer troop construction units. This has a direct bearing on our Engineer affiliation unit program.

But first, I should like sincerely to express the appreciation of the Corps of Engineers—and of the Department of the Army—for the magnificent contribution which your association has made to the Organized Reserve Corps' affiliation program.

A concept of this contribution can be gained from a few pertinent figures. On last January 1, of the total 177 affiliated units in the Engineer troop program, your organization could show sponsorship for 75. This is slightly more than 40 per cent of the total. Moreover, with only two exceptions, your 75 units are all of battalion or larger size. When Mr. Pace, our Secretary of the Army, recently described your units as being—and I quote—"real Engineer units," he was stating for all of us that we have found your men to possess the know-how and enthusiasm which make the ablest units.

Ten of the units sponsored by chapters of your association have been called into service. And two of the 10 are now in Korea, doing a splendid job. Naturally, you wonder if and when other units may be called into active service. I wish that I could give you the answer, I can't. I don't know myself. I can say only that as the Army's expansion continues, we do expect to draw on A.G.C.-sponsored units.

Miller's Unit in Korea —Page 46

Happily, I can say with absolute

confidence that the Corps of Engineers —and the nation's construction industry—can absorb the increasing work load of military construction. That this is true illustrates once more how effectively the conversion from peacetime civil works to full scale defense efforts can be accomplished under the dual military and civil mission assigned by Congress to the Corps of Engineers.

Civil Works Record Fine

Our civil works program has been discussed earlier during this meeting before your heavy industry group. It suffices for me to say that progress under the program to date constitutes a fine record. One that justifies fully the confidence of the American people and Congress in the ability of established federal agencies—in cooperation with the states—to accomplish sound and desirable developments of the nation's water and soil resources.

Recently, in accordance with directives of the Congress and the President, the entire civil works program was reviewed. This was to insure complete conformity of the program with national defense requirements. Under established criteria, affirmed by Congress, only essential projects are to be initiated. Consequently, the President, in his recent budget message to Congress requested funds for only seven new projects. Five of these seven requested projects are in our authorized program. Should Congress express its desire for their initiation through the appropriation of funds, we shall execute the work to the utmost.

A.G.C.'s "Splendid Cooperation"

I thank you men, and your associates, sincerely for the splendid cooperation that you have always given the Corps of Engineers. In years past, we have faced mobilization and war, reconversion and peace, together; and in each instance we have achieved that which we must. And now, once again, we are entered into a grave and fateful period. Once again, we are faced with the possibility of a struggle with forces that possess manpower and potential natural resources exceeding our own. Yet we do so with mutual certainty. We know that building our military strength economically and unselfishly—and at the same time developing our own resources—is the one road to survival of our nation, and to an enlightened world's trust and hope in its future.

Word from A.G.C.-Sponsored Unit in Korea:

• "Should Be Called Engineer Combat Construction Battalion"

» A SPIRITED letter was received last month from Lieutenant Colonel M. C. Miller, commanding officer of the 439th Engineer Construction Battalion, one of the two A.G.C.-sponsored units now in Korea, which General Pick advised the 32nd A.G.C. annual convention were "doing a splendid job."



Lt. Colonel Miller

Addressed to J.W. Ballard, engineer-secretary of the Kansas Contractors Association, A.G.C., which sponsored the battalion in the association's affiliation program, the letter follows, in part:

Much Moving Around

"We have finally settled in one spot long enough for me to answer your most welcomed letters and to give you a short report on your battalion.

"Moving 900 men with their personal impediments, plus 150 vehicles, plus a trainload of equipment, plus over 1,200 boxes and crates, from Camp Carson to 'Frisco, to Yokohama, to Camp Palmer, Japan, back to Yokohama, to Pusan, Korea, to a bivouac area, and to our present location, inevitably resulted in this very tardy report and the possibility that the heavy equipment hauling contractors of the Midwest might find potential future competitors in the 439th.

Kansas Flag at Parallel

"We are very happy that the beautiful blue silk flag of Kansas reached us two hours before we boarded the transport at San Francisco . . . the flag is very prominently displayed quite close to the 38th Korean parallel, staunchly defended by over 900 rugged construction men, a large majority of whom are very proud to call Kansas their home, and who are very quick to loudly proclaim such fact to anyone willing to listen.

Rugged Mission

"The mission of your battalion is to keep open a rather large sector of the main supply route roads and railroads up to one of the important front-line Army Corps. The mission is without doubt a rugged assignment, but we feel quite confident that we can capably cope with anything the Korean elements or the evil forces of Communism can throw at us. Our men are exceptionally well clothed and while the food has a very distinct sameness, it is quite adequate. While our tents are not quite the Presidential Suite at the Muelebach, we manage quite well. It is amazing the number of things you can do with a steel helmet.

"Incidentally, they left out one word when we signed our affiliation sponsorship agreement. Instead of Engineer Construction Battalion it should have read 'Engineer Combat Construction Battalion.'

Morale High

"We have learned one thing for certain, when the Army Engineers blow a structure, they most certainly do not anticipate that it will ever be rebuilt. Despite that fact we much prefer the rebuild to the blow-up end of this rugged business.

"Despite the very trying living conditions, the morale of the men remains exceptionally high, and we have had no reason to alter our previous and confident prediction that the association will never have occasion to regret its sponsorship of the 439th, nor to question its contribution to the history presently being written on this desolated and unfortunate peninsula."

The 439th was one of the first units sponsored in the A.G.C. program to be called to duty.

Miller Active in A.G.C.

Colonel Miller, at the time his unit was called, was president of the Kansas Contractors Association, a national A.G.C. director from District 5, and vice chairman of the A.G.C.'s Highway Contractors' Division. His firm is the San-Ore Construction Company, McPherson, Kansas.

The A.G.C. Governing and Advisory Boards at the mid-year meeting last fall in Chattanooga, Tennessee, voted to send to Colonel Miller a telegram of commendation and appreciation for his activities in behalf of national defense.

NEXT MONTH: A.G.C.-sponsored unit arranges to have its "summer training" in winter slack season.



Rear Admiral Joseph F. Jelley

One of the youngest flag officers in the Navy, Admiral Jelley has been both Chief of Navy Civil Engineers and of the Bureau of Yards and Docks since 1949. A native of Phoenixville, Pennsylvania, he attended Cornell University, the Naval Academy, and Rensselaer Polytechnic Institute. During World War II he directed construction at San Pedro Naval Operating Base, then became Deputy Director of the Construction Department of the Bureau, and was awarded the Legion of Merit. He next supervised procurement for the Seabees overseas, served with the Seabees at Guam, then came to the Bureau as Deputy Chief. He has pushed engineering research into light-weight and mobile construction equipment and materials to permit faster base building than during the last war.

Navy Shore Support Today

• Y&D Policy: "Quality Competition Is Still Available"

By Rear Admiral J. F. Jelley (CEC), U.S.N.

Chief, Bureau of Yards and Docks

» DEFENSE has become so complicated and affects so many phases of our economic life, that it no longer can be delegated entirely to professional military forces. It can be assured only by a united and coordinated effort of our entire population.

Team Work and Speed

This presents a tremendous problem. We have a long established habit of going our separate ways and concentrating on our own business. In peacetime, this is as it should be—because we believe in private enterprise and competition. But, during a national emergency, we've got to sacrifice this preoccupation with our own affairs. We've got to recognize that our common defense is going to require team work.

We also are confronted with a time element that is extremely serious. This urgency has been created by the fact that the Communists have never stopped preparing for war.

While we were doing our best to reconvert from war to peace during these past 5½ years, the Communists went right on sacrificing civilian luxuries in order to pursue their goal of world domination. We were uneasily aware of this, but it was a disagreeable thought. So we chose to concentrate on more pleasant things. We had just fought a war and we were entitled to our well-earned rest.

The seizure of Czechoslovakia and the Berlin blockade troubled our sleep, but Korea woke us up. It also woke up an overwhelming majority of the United Nations. That is apparent every time they take a vote at Lake Success.

But we can't get around the fact that the Communists have gained both actual and relative military strength during the postwar years. And it may be even greater than our estimates. The iron curtain has been drawn down pretty tightly.

But from the best information we have, we know that we've got a tough job to make up for lost time in rehabilitating and developing our own defenses.

The Navy's Program

Time has become the critical factor. We've got to make up the time too many of us spent relaxing too much and too long after World War II. And the only thing that will buy back time is speed—and more speed.

These are the thoughts I wanted to offer you before I started talking about contract procedures. They are basic to our defense problem today—the need for team work and the need for speed. If we can fully appreciate these two demands, it will go a long way toward solving the rest of our problems.

Now, let me return to the Navy. The story of our current construction program is less impressive dollarwise than that which General Pick has just described for the Army and Air Force.

Which is certainly logical enough—the Navy requires only just enough shore support to serve a highly mobile fleet. But it is nonetheless important to our total defenses. The Navy's shore construction program bears somewhat the same relation to an adequate defense as a couple of square inches of glass bears to a light bulb. It may be comparatively small, but it means the difference between a defense and no defense.

Our principal activities are the rehabilitation of naval training centers, the lengthening and strengthening of airfields, the construction of harbor and ammunition facilities, and a stepped up research and development program. We also are confronted with a good many miscellaneous jobs.

Rehabilitation Foremost

Broadly speaking, our present task is not so much to build new facilities as to rehabilitate and modernize those we already have and now need again. Fortunately, the Navy had the foresight to build them well in the first place.

It was a policy which is paying off both in time and in money—the difference between modernizing and building from scratch.

For example, our drydocks and shipyards can be put in shape in a comparatively short time and at very reasonable cost. Our fuel storage facilities and ammunition depots also are in good condition. The same is true of our utilities, our hospitals, our industrial plants, and many other types of facilities. Because of this, we have been able to concentrate on correcting deficiencies in the shore establishment brought about by new developments. This is particularly true in case of aviation facilities required for today's heavier and faster planes.

Since the beginning of the Korean conflict, the Congress has appropriated about $450,000,000 for Navy public

works and $149,000,000 for Navy civil engineering. By any standards, this translates into a major program, and it is one that we want to accomplish with all the speed we can pour on.

At the same time, we don't intend to achieve speed at the expense of proper economy and efficiency.

Contract Policies

I think it might be a good idea to give you a little background on our policies relating to contracts. Ever since 1945 the Navy has required practically all of its work to be done under competitive bids. I am sure that all of us prefer this procedure. The major exceptions to the competitive bid contracts involved emergency jobs requiring fast action in the wake of storms and fires, etc. There also have been a few exceptions in the case of contracts for rehabilitation of facilities where it was impossible to estimate with any accuracy the amount of work that would be required. But these exceptions represented only a very small part of Navy construction. Most of our work was handled by advertising and by competitive bid.

Competitive Bids Preferred

On last December 16, when the President issued his emergency proclamation, the Secretary of the Navy invoked the first exception to the Armed Services procurement regulations. This was that contracts could be negotiated due to the urgency created by the national emergency. However, this new authority did not alter our general policy. **The Bureau of Yards and Docks still holds to the view that competitive bidding serves the best interests of both the government and the contractors. We intend to pursue this policy as long as practicable. The only exceptions will be in cases where the urgency of the work makes competitive bidding unfeasible.**

We believe that by proper planning and scheduling of the Navy's shore construction—and by preparing plans and specifications as far in advance as possible—the majority of Yards and Docks contracts can still be let on competitive bid.

This enables us to get jobs under way with a minimum loss of time. However, we must recognize the fact that if the nature of our work and the speed with which it must be accomplished become too great, we will be forced increasingly into the negotiated type of contract. In a few cases we already have found it necessary to negotiate lump-sum contracts.

Bids Have Increased

We have been able to avoid cost-plus-fixed-fee contracts for practically all of our continental work. And I see no immediate likelihood that we will have to make extensive use of them. Of course, if the material and labor markets get too bad, and contractors put in for exorbitant contingencies, we will have to go on a CPFF basis. Some of you contractors feel that this is now the case, but we don't think so. Our experience is that quality competition is still available. **In fact, we have been gratified to find that we are getting more bids—and more closely grouped bids—than was the case a few months ago.**

I don't know how long this is going to last, but I am sure that at this time we would not be justified in abandoning the competitive and negotiated lump-sum forms—and the fewer negotiated contracts the better.

You also might be interested to hear that we are accelerating our policy of giving more authority to our field offices. We began this in 1948, and the field has been gaining valuable experience since then. Our District Public Works Officers are becoming increasingly competent to handle a larger volume of work.

As you know, the Navy operates a headquarters in each of its 14 Naval Districts as well as the Potomac River and Severn River Naval Commands. In each of these Districts is a District Public Works Officer who is a senior officer of the Civil Engineer Corps.

Awards Decentralized

We have authorized these DPWOs to award competitive bid contracts up to $1,000,000. In some cases we have given them authority to let bids for even larger amounts; however, no blanket authority to *negotiate* construction contracts has been given them.

When circumstances justify negotiations—as they do in special cases—the District Public Works Officer will be authorized to negotiate locally. Our attitude is that it is a waste of contractors' time to bring them half way across the country when the site of the job and the facts concerning it are better known locally.

Our primary objective is to get quick action. We believe that the more authority we give the field, the faster we'll be able to operate. We believe our field officers are capable of exercising both judgment and initiative, and if the means for quick action is not available, they'll be able to find a means. We want to cut down on red tape and put out more and more of our work on a local basis. In other words, we want speed.

Recruiting Emphasized

Speaking of speed, that means Seabees—and Seabees are back in action. They already have played a small but vital part in the amphibious actions in Korea. For example, they placed the pontoon causeways which enabled guns and equipment to be brought across the mud flats during the Inchon invasion. They succeeded in overcoming the problem of a 30-foot range in tides, and supplies rolled across the causeways 24 hours a day.

We've got several Seabee battalions at work overseas and others in training here in the States. We've built up these forces principally by drawing on the Organized Seabee Reserves. We're still bringing Seabees on active duty, and we're getting capable and experienced men—the same kind that made the Seabees' reputation in the last war.

But we need more of them, including a Volunteer Reserve force in case of full mobilization. You can help us in this by spreading the word that the Seabees give Petty Officer ratings for the construction experience a man can bring to the Navy. You've already given us good support in your magazine, THE CONSTRUCTOR, and we appreciate it. But our recruiting of skilled men is still a priority program.

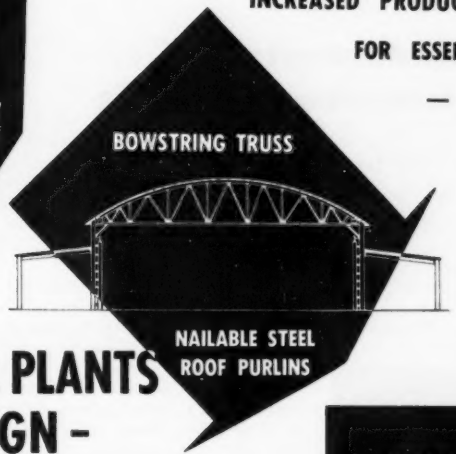
Unprecedented Speed Seen

As I said at the outset, we've got to make up for lost time in our efforts to keep ahead of the Communists' war machine and that is going to require down-to-earth teamwork all along the line. We're already making good speed, but it is only a crawl compared to the speed that would be required *if* and when international developments take a turn for the worse. Not even the pace of construction during World War II would suffice if full-scale war comes.

Newly developed weapons — and the atom bomb in particular—would put a demand on your services that is difficult to conceive. But if that time ever comes—and your own and this country's survival are at stake—I am sure your concern will be simply: "Where and how can I help?"

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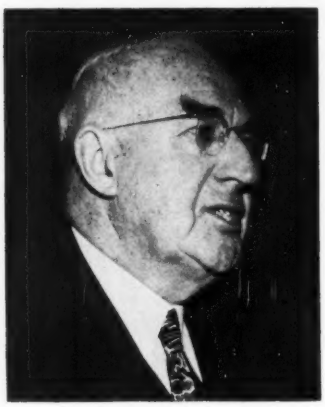
Fundamentals of The American Republic

By Daniel L. Marsh

President, Boston University, Boston, Massachusetts

» THE French historian, Guizot, once asked James Russell Lowell, "How long will the American Republic endure?"

Lowell replied, "As long as the ideas of the men who founded it continue dominant."



Dr. Marsh

One of the most forceful and eloquent speakers in the top ranks of American educators, Daniel L. Marsh retired as president of Boston University as of March 1 after 25 years at the helm, during which time the institution's enrollment increased from 11,000 to more than 34,000, and its assets increased many-fold. Extensive construction on the new Charles River campus during his presidency makes it one of the finest educational plants in the country.

Dr. Marsh accepted the chancellorship of the University upon retirement. His diversified activities include trusteeship or directorship of many large religious, philanthropic and business institutions. He has served in many civic and governmental positions and is an author of renown.

A native of Western Pennsylvania, he once taught school, and held a pastorate position in the Methodist Church. His education was obtained in America and in Europe, and he has received 16 honorary doctor's degrees.

What were those ideas? Do they still dominate the minds of our citizens? About a year ago, a news dispatch from Montpelier, Vermont, quoted Governor Gibson as saying: "If the Democrats came out in favor of the Ten Commandments the GOP would be against them." Let me offer ten commandments which the GOP might wisely adopt as its platform. I would like to have the Democratic Party also adopt the ten commandments which I am going to propose.

The ancient Israelites were given Ten Commandments, which were intended to perpetuate their monotheistic faith and also their own national safety and well-being. If we were to take Lowell's answer to the French historian's question, namely: that the American Republic will endure as long as the ideas of the men who founded it continue dominant, could we find a better challenge than in the following ten propositions?

1. *You shall adhere to the republican form of government.* It would be well to talk less about democracy and more about the republic. You can have a democracy without a republican form of government, but you cannot have a republic without democracy. Any encyclopedia will give you the trite definition that a pure democracy requires a country so small that all the people can meet in one place to make their laws and choose the men who are to wield authority. The early New England town meeting was the only true democracy that ever existed on this continent.

Bureaucratic Rule Hit

But democracy is more than a definition. It is a spirit and way of life. Its essence is the dignity and freedom of the individual. Under our form of government, it is called a republic. A republic is a democracy in a country so large that the people cannot all participate directly in law making. A republic is a government in which the people choose from their whole number certain others to enforce the laws. The chief-executive, usually called president, does not inherit his office for life: he is elected to it for a term. In a republic, every citizen, howsoever humble or obscure, bears his share of responsibility for the government.

An essential idea of a republic is that the people choose their own officers, and hold them responsible. That is the reason why the turning over of so large a part of governmental responsibility to bureaus is a dangerous thing; for bureaus are run by persons who are not directly amenable to the voters. Bureaucratic government, if it is extended much more in this country, may imperil the life of the republic.

2. *You shall keep the system of checks and balances in government inviolable, allowing no one branch to encroach upon another.* The framers of the American Constitution knew that it was well to place restraints upon the various branches of government. Thus the President is held in check by Congress; the Congress is held in check by the President, and both the Congress and the President are held within the limits of the Constitution by the Supreme Court.

Exalt Congress

The concentration of power comes because the people grow impatient. They are hungry or they are heavily taxed, or they feel that the country is not sound, and so they pick out some one person, a favorite at the time, and they trust that person with power. The taste of power is very delicious, and more and more is accumulated. The first thing you know, you have concentrated power in one person, and have taken it away from the representatives of the people, and you have left one person who has gotten what he calls a mandate. He can strut upon the stage of action with his mandate and flaunt the will of the people.

If there is need of protecting the President so that Congress may not encroach upon his powers, there is even greater need of watchfulness that the President does not usurp the powers of Congress. There has been a tendency in recent years to belittle Congress, to joke about it, to pass uncomplimentary remarks upon it, and to create the public opinion that Congress is a sprag in the wheel of progress, a sort of necessary evil, per-

haps. The simple truth is that Congress is the one bulwark between the American people and the possibilities of a dictatorship; for if there should ever be in the presidency a man both strong and unscrupulous who could usurp the prerogatives of Congress, our republican form of government would cease to be. Therefore, magnify Congress, exalt it, let each new generation view it with respect and appreciation—and let the members of Congress always conduct themselves in harmony with the enormous importance of their high position.

3. *Remember always that a republic is a government by law and not by men.* Therefore, it is the duty of Congress to enact, and the President to approve and enforce just and equal laws, and it is the duty of every citizen to give due and reverent obedience to all laws. A flippant and irreverent attitude toward law menaces the safety of the republic. It is especially important to keep this in mind at the present time, for every war is followed by a period of lawlessness. Following the Revolutionary War, anarchy stalked through the land. Following the Civil War, there was a malodorous mountain of corruption, malfeasance and sinister legislation. Following World War I, there was a period when there were really two governments in this country, the legitimate government, and the underworld government of gangsters. Prohibition was blamed, but Prohibition only furnished an occasion for lawless impulse to express itself, even as conditions now do not make but only furnish an occasion for all manner of crime.

4. *You shall relegate to innocuous desuetude any politician who seeks to ride into office on waves of hate and suspicion, for the essential unity that constitutes us one people is the palladium of our liberty, happiness, safety and prosperity.* The person who, for political advantage, stirs up racial animosities or religious prejudice, or who tries to array section against section, or who appeals to a single group —as to either labor or management— is an enemy of the republic, and should be known as such.

5. *You shall not permit any organized faction or minority group to put its will in place of the will of the nation.* We talk much about protecting the rights of minorities,—and we should scrupulously protect them; but sometimes an organized minority, through combinations and pressure methods, through boycotts and bloc voting, can elevate to positions of power selfish and unprincipled men who will try to stay in office by currying political favor with ambitious minorities rather than by serving the whole nation. There is no tyranny more terrible than that of a selfish minority in the saddle.

6. *You shall keep the spirit and practice of discussion alive.* In a republic, the people are the rulers—the persons whom they have chosen to make and enforce their laws are only their servants. Therefore, the people have both the right and the correlative duty of discussion. They must be free to discuss the work of their officials, to criticise it, to find fault with it, to tell the officials what to do, and to dismiss them if they do not do it. Free discussion is the very breath of life to a republican form of government.

Discussion and Patriotism

There are persons who, in times of stress or strain or crisis, always try to have people stop discussing the party in power or the officials in power. They try to make out that unless you accept everything that is said and done, without discussion of it, you are unpatriotic.

Let me tell you, gentlemen, the unpatriotic person is the one who tries to cram down the throat of the American people the conceptions of selfish government conceived by the party in power, without allowing the people to discuss it and hold it up against the light at different levels and see what it is actually.

7. *You shall preserve a sound economic structure.* It is imperative that we should cherish public credit. To that end, the Nation's debts must be paid, its budget honestly balanced, and taxes upon its people kept as low as is consistent with these imperatives. Soundness of economic structure requires protection of the traditional right of free enterprise. It demands also that the natural human needs of food, clothing and shelter shall be supplied to its citizens. That means that everyone able to work should have an opportunity to do so, and every family should have an opportunity for shelter in which to live a normal family life.

8. *You shall cultivate cooperative peace and harmony with all nations.* No nation can live to itself, and no nation can die unto itself. Our nation has grown so great and powerful that it can now dare to assume leadership in giving to the world a demonstration of international justice and benevolence.

This thing of strikes and blustering and making threats and calling names —oh, it looks so much more brave and it is so much more easy to do than to work out a system of cooperative peace and harmony with the nations of the earth. Isn't it strange that in national affairs, as in individual affairs, the line of least resistance is usually wrong? It is the harder way to do things that is generally right; and it is harder to maintain peace than to fly to war . . .

Every last civilization that rose and fell, fell because of war. Full many a time, a nation has gone to war, ostensibly to preserve its own way of life, and has so announced, only to find that in the awful misery and suffering and bewilderment and burden of taxation that resulted from the war, the nation itself collapsed.

9. *You shall promote education.* No man embodied more completely the ideas that went into the founding of our republic than did George Washington. Heed, therefore, what he says: "Promote as an object of primary importance, institutions for the general diffusion of knowledge. In proportion as the structure of a government gives force to public opinion, it is essential that public opinion should be enlightened."

Education is the indispensable means by which the ideas of the men who founded the American republic can be disseminated and perpetuated. Only through education can the people be kept from becoming greedy and ignorant, from degenerating into a populace incapable of self-government. It is only by education, religion and morality that the people can save themselves from becoming a willing instrument of their own debasement and ruin. The American republic will endure only "as long as the ideas of the men who founded it continue dominant."

10. *You shall maintain the spiritual foundations of the republic.* The men who founded this republic believed in religious liberty, and they were religious! They believed in freedom of worship, and they worshipped! They knew that public morality must restrain ambitious men, and they also knew that morality without religion is like a flower torn off from its root. The ideas that went into the making

of this republic were the ideas that had been proclaimed from the pulpits of the colonial meeting houses for a hundred years before the republic was established. Keep regnant the ancient pieties and virtues upon which this Nation was founded. If there ever was a day when we needed honesty in government, it is now. I shall never forget how impressed I was as a boy to read that when John Quincy Adams was President of the United States, he forbade his son to use on a private letter a postage stamp which belonged to the government. Oh, for a return of that old-fashioned honesty, honesty that was more than legal honesty!

7 American Documents

A few years ago I wrote a book entitled *"The American Canon."* It was the result of many years' research for American documents so significant, so inspired, so esteemed by Americans, so durably valuable to the American people, so pregnant with the essence of the American spirit, so revelatory of the genius of America, that, taken together, they constitute the authoritative rule of Americanism. I finally selected seven documents which I hold bear as vital a relation to intelligent American patriotism as the Canonical Scriptures bear to our religious faith. It is striking that the spiritual element which springs from a knowledge of the Bible is in every one of these immortal documents.

Let me show you: I hold that the Genesis—the "In the beginning"—of American democracy is the Mayflower Compact, and it opens with the words, "in the name of God, Amen," and the writers declare that what they are doing they do for "the glory of God." The Exodus of American democracy is the Declaration of Independence,—it marks our going out from the land of bondage to the promised land of liberty and self-government—and it makes a fourfold appeal to Almighty God. Our *Book of the Law* is the Constitution of the United States, and in the Constitutional Convention, when it seemed utterly impossible for the delegates to devise any instrument for the more perfect union which they were contemplating, Benjamin Franklin arose and moved that the Convention should be opened each morning with prayer. The speech in which he made the motion is one of the most powerful of his distinguished career, and it is replete with Scriptural quotations and allusions. Our *Major Prophecy* is George Washington's Farewell Address, in which he says: "Of all the dispositions and habits, which lead to political prosperity, religion and morality are indispensable supports. In vain would that man claim the tribute of patriotism, who should labor to subvert these great pillars of human happiness, these firmest props of the duties of men and citizens." Abraham Lincoln's Second Inaugural Address is the Gospel of Americanism. Its Scriptural cadences are freighted with a moral intensity. In it, Lincoln affirms and reaffirms his faith in the justice of his cause and in the righteousness of God. The last article Woodrow Wilson ever wrote, entitled "The Road Away From Revolution," I have called *An Epistle to the Americans.* In it, Wilson pleads for "a Christian conception of justice," and declares: "The sum of the whole matter is this, that our civilization cannot survive materially unless it be redeemed spiritually. It can be saved only by becoming permeated with the spirit of Christ." *Our Psalm of Americanism* is "The Star-Spangled Banner." Not often do we think of it as a religious hymn, and yet note the spiritual passion and the religious phraseology of the last stanza:

"Oh! thus be it ever when freemen shall stand
Between their loved homes and war's desolation!
Blest with victory and peace, may the heaven-rescued land
Praise the Power that hath made and preserved us a nation!
Then conquer we must, when our cause it is just,
And this be our motto: 'In God is our our Trust.'
And the Star-Spangled Banner in triumph shall wave
O'er the land of the free and the home of the brave."

A.G.C. of Iowa Establishes Scholarship

• Award at State College to Spur Construction Education

» TO ENCOURAGE superior students of engineering to bring their talents into the field of engineering construction, the Associated General Contractors of Iowa has established a scholarship at Iowa State College.

The first annual award of $500 from the grant to be known as the A.G.C. of Iowa Scholarship Fund, will be made this year.

In acknowledging the offer, the institution's President Charles E. Friley wrote, "I think it is very fine that the Associated General Contractors of Iowa has established a scholarship at the Iowa State College. In my mind the whole scholarship program is one of the most important developments in our efforts to recognize outstanding students."

Qualifications for Award

The intent of the award is to assist a qualified student who might otherwise be unable to continue his engineering education, or to take additional advanced courses to better qualify him for his life's work.

The chapter's board of directors requested that the award be made to a student who has completed his junior year in civil engineering, who has limited financial resources, who has had at least one summer's employment by an A.G.C. member on construction work, who plans to major in engineering construction during his senior year and whose scholarship, personality and activities "give promise of achievement in the construction field."

Summer work with an A.G.C. contractor was inserted to encourage young engineering students to add construction experience to their pre-graduate training and test their aptitude and liking for such a career.

However, failure in one field of an otherwise highly qualified candidate will not eliminate him from consideration.

Committee to Select

A committee appointed by the Dean of Engineering will select the award winner, whose name will be submitted to the A.G.C. of Iowa for approval.

The A.G.C. committee which recommended establishment of the scholarship, and which formulated the conditions for award is as follows:

Arthur F. Mathis, West Des Moines, chairman; J. C. Costigan, Elkader; Frank Easton, Ames; Kenneth Graves, Melvin; Marshall Jones, Sioux City; George C. Koss, Des Moines; and Aaron Miller, Waterloo.



What is 3-AXLE SMOOTHNESS?

The answer to this question is a matter of record. By actual test, it is the highest degree of road surface smoothness ever attained with tandem roller. A leading state highway department proved that the Buffalo-Springfield 3-axle tandem produces surfaces 50% smoother than the average obtained with conventional tandems of equal capacity. Also noteworthy, the same test showed that the 3-axle tandem averaged 60% more tonnage compacted than other units on the project. As a result, the specifications for asphaltic surfaces in this state now permit the use of one less tandem roller with each spreader, *provided* a 3-axle tandem is one of the rollers employed.

Still another state specifically requires the use of a 3-axle tandem on certain plant mix surfaces.

There's a reason for this greater work capacity and smoother rolling results. The two large diameter guide rolls and the drive roll of the 3-axle tandem are rigidly mounted in a position tangent to the same plane. Thus, when one guide roll strikes a high spot in the pavement, the other is lifted clear of the surface and its weight transferred to the rolls retaining surface contact. Result—maximum compactive effort where it is needed most—on the high spots in the surface.

You can learn more about this transfer-of-weight principle and the many other exclusive features of the Buffalo-Springfield Model KX-25, 12 to 19 ton, 3-axle tandem from your nearest distributor. Why not call him today?

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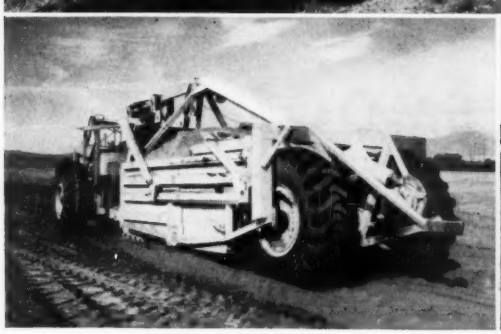
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REQUEST GENERAL TIRES ON YOUR NEW EQUIPMENT

Public Works and the Contractor

By Milton Rosen

President, American Public Works Association

» AS a matter of suggestion, the only constructive criticism I have to offer to the contracting fraternity is the fact that you really are backward —that you have not taken the initiative in helping various engineers throughout this nation formulate plans and help them present to their various governmental agencies the desirability of a much-needed public works program.

During the past 12 years the construction of new streets, sewers and other municipal facilities has fallen far behind the needs. Very little new pavement has been constructed and the general sewer system in many areas of the city is quite inadequate. It is my honest opinion that every community should, when the materials are made available and government restrictions are not as severe as they may be during this emergency period, lay out a constructive 5 to 10 year plan for its municipal needs. This should take in paved streets, sewers, building of essential bridges and reconstructing or replacing the present-day bridges.

Road Needs Desperate

I believe I am correct when I say that this nation is desperately in need of wider and safer road construction for the needs that are demanded of good road construction by the so-called over-the-road transportation system which includes trucking and bus lines. There should be an elimination of all dangerous intersections and where there is a heavily travelled thoroughfare, construct a divided highway.

The desirability of a program such as this can only be formulated by the community being sold on the idea that it is cheaper in the long run to put on a good construction program and sell bonds covering the entire cost making a definite payment on a 20 or 30 year basis than it is to go about neglecting new road construction and wasting a lot of money on so-called maintenance cost. The need for adequate bridges is in the same category as that of pavements and sewers.

In all of these needs we find that the city is the orphan child as far as financing is concerned. State and national projects do not seem to have particular difficulty in financial arrangements. Although there is some distribution of special taxes to aid cities, the bulk of the funds must come from the overworked real estate tax. A greater proportion of highway users funds, gas tax and license fees, must be made available to cities for the construction of highways and bridges. There is no money in the budget for new construction in our city and in many others, and I believe it is time for someone to develop a liaison official who will act between the business people of a community and the elected and appointed public officials.

Referring to the City of St. Paul, when I took over the office of public works as Commissioner in 1930, I discovered that the courthouse that was going to be torn down and replaced by a new one hadn't had one penny of its bonded indebtedness paid on it from its original cost. The old courthouse was bonded and when the bonds came due, they were just refinanced. Our Robert Street Bridge was torn down and a new bridge built and the old bridge hadn't been paid for yet. We had several instances such as this. In 1936 we took all of our outstanding indebtedness and bonded them in one issue and the city paid them all off and we have set aside 5% of the amount due each year back in 1936, and in 1956—that's the end of a 20-year period—this city will be free and clear of all its past indebtedness other than the so-called welfare bonds that have accumulated to a great extent. I believe in good financing—I believe in sound financing—I believe in good public relations between the taxpayer and the elected or appointed public works officials. That's essential, and I still think that the development of work for you men who have millions upon millions of dollars tied up in equipment and manpower must be given favorable consideration at this time in order to keep our employable men working.



Milton Rosen

Mr. Rosen has held the elective position of Commissioner of Public Works in St. Paul since 1930 with the exception of two terms. He is owner of The Milton Rosen Tire and Rubber Company which he has operated since 1915. He is a native of Chicago.

Now let's go back to road construction. Why should we have to wait for another World War or a catastrophe of some kind to make the public understand that development of trunk highways is so essential to the good and welfare of our state and nation? Why should we hesitate to spend money for our own national improvements that are so vital and essential to our future development of this country? Why should we fear and fret about bonding ourselves for much-needed improvements that every community like my City of St. Paul is in such dire need of promoting?

Contractors Should Promote

You should develop this type of promotion. Let's be frank—do you expect your public officials to come out and recommend the very thing that you and I know is so necessary and so vital to my community—your community—or don't you think it is about time that there is an educational process to bring forth to the people of this nation the very thing that you and I,—you as a contractor—myself as a public official,—have been talking about for years but have been rather skeptical about bringing our thoughts before the people of our community because of the implications that we were trying to create work for contractors.

Well, what about it? What harm is there in creating work for the con-

tracting group? It isn't everyone of you fellows in this audience who is capable of getting a contract as large as some of the big plums that have been handed out in Washington and our various governmental agencies, but I believe it is safe, sound, and good business to develop construction work in every state of this Union, and it isn't all a matter of bonding the city or the state or the nation for a lot of essential improvements. Most states have gasoline taxes derived from the automobile and trucking industry. I believe that every penny of this money that can be made available for safe, sound road improvements, should be a *must* in your state as it is in my state.

During the year of 1948 and 1949, I was President of the Minnesota Good Roads Association and this isn't egotism on my part, but it is pride in our officers and members that I say to you, we have watched the funds of our Minnesota State Highway Department, under the able and capable leadership of our present Highway Commissioner, Mike Hoffman, and his predecessors, that we have successfully opposed the diversion of any of these funds to any other purpose excepting for the Minnesota State Highway Department and its trunk highway system.

I believe that Commissioner Thomas MacDonald, the Commissioner of Public Roads, is heartily in accord in the establishment of more north, south, east and west federal roads. I am positive that the people of this nation are thoroughly in accord in the belief that we should have interstate federal trunk highways. So why not start developing some of the thoughts that have been brought before your group on a national basis and on a state-wide basis in the past and let's have some action.

Sewage Plants Needed

So much for road building—let's go into the sewer situation. You, as contractors who are in this business, are losing out on the great thought that has been left to go by the boards by all of you and I have in mind the Minneapolis-St. Paul Sanitary District when I bring to you this thought. It was the custom of this city in the past to dump all of its filth into the Mississippi River. This was a river which in the early days was filled with game fish—bass, pike, sunfish, sturgeons, crappies, and it wasn't an unusual sight to see people fishing in the Mississippi River right under the bridges that crossed from one side of the river to the other on the banks bordering both St. Paul and Minneapolis. Then with our big industries and with our homes throwing all of its sewage into the river, fish life soon disappeared and there was no such thing as swimming in this beautiful river—but times have changed. Due to the installation of our sewage disposal plant in St. Paul, the river from the north boundary of Minneapolis to the south boundary of St. Paul is as clean a body of water as you would ever want to find. There is no direct volume of sewage going into the river. It is all passed through a main interceptor sewer to the sewage disposal plant and then after it has been treated, it is permitted to go on its merry way to the south. The thought I want to leave with each one of you, whether you are in the contracting business or not, is that no body of water was ever intended by nature or by the Creator Himself to become your sewage disposal plant or a contaminated body of water that has proven in many instances disease-spreading in a lot of communities.

You'll get a lot of objectors to the idea that I am trying to formulate at this meeting. We, in St. Paul, objected to it—objected to it strenuously, but after spending several million dollars and realizing the healthfulness and the cleanliness that has been brought to our attention by our own sewage disposal plant, we are just tickled pink and there has never been a single objector that I know of who has been asked to pay for sewer rental charges or any other charges made to them by the Cities of St. Paul and Minneapolis for the maintenance of the Minneapolis-St. Paul Sanitary District. The building up of suburbs adjoining our cities has created sanitary problems. Our larger cities are frequently called upon to furnish these areas with sewer and water service and when charges are made commensurate with the city costs and service rendered, there is an uproar. Industries move out into the suburbs, outskirts or fringe, as we call it in our city, new shopping centers are developed because they can stop and park and shop without being handicapped by parking meters or local restrictions pertaining to parking. And then a lot of people have moved out into what we call our suburban area so as to get what they think—cheaper taxes or more roomy area for their homes and the bringing up of their children. Then they discover they have no sewer facilities and septic tanks must be used. They find they have no water so they must drill a well and in some instances, they find that they have built the septic tanks too close to the well and that is a headache in itself, as you can readily see.

So the people demand that they be permitted to hook on to our sewer system and that we furnish them with our city water, they not realizing the cost of such operation to our community. There is a great field for the creation of metropolitan districts and the construction of highway, sewer and water facilities to adequately serve entire areas.

Promotion the Answer

Summing it all up, and as a public official who has had many years' experience in this public works field, I view the contractors' position today as most important, and you who are in the contracting business must take it upon yourself to become interested in the development of ideas that can be sponsored not only by your public officials alone, but by the business men and business women in the communities in which you intend to work, and knowing the situation as well as I know it, I say there is plenty of work to be developed by you men who are in this field of contracting.

Let's be realistic—it's going to take promotion—it's going to take initiative—it's going to take more than just hearsay conversation. Most of you are members of your Chambers of Commerce and many of you belong to various civic organizations like the Rotary Club, Kiwanis Club, or the Lions Club and many other fine civic organizations. I think you've got to work through each one of these groups to bring out the idea that I know is on the minds of most people, but they lack leadership. You've got the leadership—you've got the materials—and why don't you put it to work.

Your position with reference to civilian defense is most important. Every contractor, every person who has an organization must become acquainted with the needs of our government pertaining to civilian defense. The Department of Public Works of St. Paul sent out the following letter to private contracting firms:

(Continued on Page 58)

TRUSCON... a name you can build on





more beautiful exteriors
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with this better steel window

Interesting architectural and decorating effects are open to the architect and builder in the handsome qualities of Truscon Intermediate Combination Windows, as in the Lima Memorial Hospital, Lima, Ohio.

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TRUSCON MARK OF MERIT PRODUCTS

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(Rosen—Continued from Page 56)

"The Department of Public Works of the City of St. Paul is making an inventory of equipment and manpower of private contracting and construction companies and other agencies which might be avilable for emergency use in connection with civil defense measures for the City of St. Paul. As you know, from accounts in the public press, the City of St. Paul has taken preliminary steps in the organizing of its resources for this purpose. For the present each local community is working out its own plans.

"The objective of the Department of Public Works, comprising the engineering and public work division, in case of an emergency, is, with such volunteer help as may be available, to restore as soon as possible and to as great an extent as possible, the use of streets, sewers, bridges, airports, and other public facilities of this nature. It is essential that heavy construction equipment and experienced manpower, both skilled and unskilled, be available for this purpose. Plans are being worked out for the concentration at given points of both manpower and equipment, following certain 'alert' notification.

"We are desirous of learning from you as to heavy construction equipment and manpower which you have available locally for use in case of emergency. The attached questionnaire embodies a general idea of the information required. It is realized that in the construction business such a statement may vary from week to week. We should in general, however, be able to get a fairly good picture as to available equipment. The placing of a list of your manpower on a volunteer basis would not at the present time involve any obligation. It would, however, give us an idea as to possible source of equipment, manpower and construction materials, such as heavy timber, steel beams, etc. Your prompt return of the questionnaire will be greatly appreciated."

Get on your toes—put your public relations men to work and I am sure that there is a most important place for the contractor and the companies with equipment and manpower in this civilian defense setup and our government needs you just as much, if not more so, than you need the government.

Don't Let Rain Stop Heavy Equipment

• Suggestions Prepared by LeTourneau Field Engineers

» INCLEMENT weather, according to Bureau of Public Roads bulletins on equipment performance, is one of the most important factors contributing to down time of heavy equipment. Equipment down for weather results in decreased production and increased costs, and can be the deciding factor as to whether the contractor makes or loses money on his job.

There are, however, several things the equipment operator can do to reduce weather down time and keep his equipment rolling throughout the rainy season. Here they are:

In anticipation of short wet spells or prolonged rainy weather, keep the haul road smooth. Use a dozer or scraper to fill in large holes or pockets that temporarily hold or impound water. Assure good drainage through the construction of adequate ditches and culverts. Keep constructed ditches and culverts clear of weeds, rocks, debris and other obstructions.

If it looks like it's going to rain, smooth up the fill, cut, borrow pit or haul road at the end of shift. This can be done easily with a scraper by dragging the blade on the return trip or by back blading with a dozer.

Watch your drainage in the borrow area. Load down hill in the direction of lines of natural drainage. Keep the borrow area free of pockets or low spots that encourage ponding. Eliminate ruts by smoothing the borrow pit, or by going from the borrow to the haul road over different routes of travel.

Rooters are useful for securing bigger loads in the borrow or cut area. If conditions are wet or if it looks like rain, don't root material too far ahead of the scraper. Keep the area as solid as possible. Loose, rooted areas absorb water rapidly and get too wet to work. Settle for smaller loads rather than shutting down entirely.

For good drainage, keep cuts low at the sides and high in the center. Good operators construct cuts in this manner primarily because it's the only right way to maintain proper slopes.

Keep the fill compacted as solidly as practicable. Do this by spreading the loads in thin, even layers. Compact by changing the path of travel of each load. For proper fill construction, build the fill so it's high on the shoulders and low in the center. During wet seasons, it's a good idea to level the fill and give it some crown for drainage at the end of the shift. Following the proper procedures before rain can save a lot of job down time.

Start back to work earlier after a heavy rain by putting available dozers to work a few hours ahead of other equipment. Use the dozer to skim off mud, drain and fill water holes and ponds. If there is a penalty existing against the job completion date, you can get to work faster by wasting, stockpiling or spreading out to dry mud or materials too wet to go on the fill. This material, if worth saving, can be picked up later a little at a time along with drier materials. By doing this, too much wet material won't be placed in the fill at any one time.

Where showers have wet the top inch or so of the haul road, making it dangerous for rubber-tired units to work at top speed, pick up a load of sand or cinders or get some dry material out of the cut or borrow area and spread a thin layer over the haul road. If the haul road is too long to make this method practicable or if wetness has penetrated three or four inches below the surface, it can be scraped off with scrapers. Heavy grades on the average construction road get slippery faster and stay slippery longer. For best performance, reduce grades to a minimum. Slippage decreases travel speed, reduces the size of load that should be carried, makes for hazardous operation and can shut down the job altogether. Eliminate slippage and get top speed and higher yardage.

Soft spots in haul roads that bog down machines can be patched by mucking them out with the scraper or dozer and filling them with dry dirt from the cut.

Adjust tire pressures within recommended load-carrying limits for best job operation. Lower air pressure and reduced speed can be used where underfoot conditions are soft, spongy and rubbery to extended depths, and where flotation would be of first consideration. Use higher tire pressures to cut through shallow mud to get to firmer footing.

The Outlook for Construction Equipment

By Ralph K. Stiles

President, Construction Industry Manufacturers Association

» I FEEL greatly honored and consider it a rare privilege to have been selected, as a representative of the manufacturers of construction equipment, to address this session of your annual convention. The subject I am going to discuss is "The Outlook for Construction Equipment."

It is going to be extremely difficult to come up with any kind of an answer, good or bad, that can be termed accurate.

We are now engaged in a small-scale war and, at the same time, are preparing with all possible speed for an all-out war, should it be forced upon us. Our nation is being called on to furnish our allies with the implements of war. That, together with our own needs, places a tremendous burden on the entire construction equipment industry.

We are all aware of the serious task now facing us. We know what the needs of our military establishment are, and realize the necessity for quick action. We know that the long-range military plans are not to be changed; that all current planning is in terms of ten or more years.

Our industry is much better tooled for a full-scale war now than it was before World War II. Regardless of that, plants will be expanded, tools assembled, aircraft facilities geared to 50,000 planes per year, and tanks to 35,000 per year.

While the items just mentioned are not classed as construction equipment, they do affect the manufacturers of construction equipment, in that they "chew up"" a tremendous tonnage of steel and some components of both are made with our industry's facilities.

War plants will be on a three-shift basis wherever available manpower and steel permit. After the necessary stockpiles are built up and the standing military forces are equipped there will be some easing off.

You are to see great stockpiles of equipment standing idle, while you are crying for that same equipment you so sorely need, but stockpiles are very necessary in modern warfare. Each division calls for a tremendous amount of equipment and it must be ready to move out with the troops. It must be there waiting.

Materials Control the Answer

Controls are beginning to tighten now, and the pinch is on. A great many manufacturers in our industry are actually faced with a slowdown or a possible shutdown due to their inability to obtain sufficient materials. Many are being forced to purchase material on the grey or black market. Thousands of tons of steel in various forms are being imported from Europe at prohibitive costs, in an effort to keep going and hold manpower in place; all of this in face of the fact that more steel is being produced now than ever before in our history.

What is the answer to that? It is a *CONTROLLED MATERIALS PLAN*, and until we get it we will remain in a state of utter confusion. The earliest effective date I have heard offered for such a plan is July.

I have nothing but respect for the personnel of our National Production Authority organization. The Construction Machinery Division is staffed by highly competent men from our own industry—men who know our business and understand our problems. I know they are fully aware of the current situation and doing everything in their power to handle it by working out rules and regulations that will permit us to operate efficiently and with the greatest economy.



Ralph K. Stiles

Mr. Stiles is serving his second term as president of the Construction Industry Manufacturers Association. He is Executive Vice President and a director of the Austin-Western Company, Aurora, Illinois. He is a native of Iowa and a graduate of the University of Iowa.

Defense Mobilizer Wilson states that there won't be steel except for the most urgent public construction, and that super-highways are out for the duration. Actually, if we can keep our abused and badly neglected existing highways in good repair this year, we will be doing well.

Going back just a little to the manufacturers' difficulties and the need for C.M.P. We are now operating under a "DO" system of priorities. Each Defense Order carries a priority number. The number has no relation to preference, but simply denotes the service for which the material it covers is intended. Up to now, "DO" priorities have not carried any degree of essentiality. So what happens? We, as a manufacturer, are unable to obtain sufficient steel without a priority. We all go out for some of these "DO" orders and serve them on the steel mills. The steel companies are only required to accept "DO" orders for a very small percentage of their entire production and tell our purchasing agent that they are booked solid with "DO" orders until this fall. This means that the remainder, or bulk of their production is being divided among old customers whether they are making toys or any other non-essential items. Actually, in a great many instances, you would have been better off without the priority. Your "DO" priority you fought for so hard simply becomes a "hunting license."

In my opinion, we will never get this nation and our allies, to whom we are committed, armed with the proper amount of equipment until a Controlled Materials Plan is put into operation.

It is believed that when C.M.P. goes into effect we may expect some-

thing like this. The military gets first call on all the types of construction equipment they require. They also get first call on all materials, critical or otherwise. Whatever material is left will then be allocated to the producers of essential equipment, to be used in production of equipment which will presumably carry priority assistance. Then, what happens to the non-essential producer? He converts his plant to produce essential goods either as a prime or subcontractor. This will undoubtedly mean less equipment for civilian use than was furnished in 1950. Where that level will be is yet to be determined—possibly as low as 25 to 35%.

The Construction Industry Manufacturers Association has recently completed an exhaustive survey of our industry's requirements, to be used by the NPA in determining what is needed for our over-all programs; that is, what we must build for the military and our share of what is then left for civilian needs.

It must be remembered that there are many groups who are working out requirements for essential construction programs, such as:

Federal Civil Works—Civil Aeronautics Administration (Airports), Veterans Administration (Hospitals), Bureau of Public Roads, etc.

State and Local Works—Federal Security Agency (Schools and Hospitals), Housing and Home Finance Agency (Housing)

Private Construction—Defense Power Administration (Electric Utilities), Petroleum (Oil and Gas Projects)

Foreign Needs—ECA

A.G.C. Largest Equipment Users

The members of A.G.C. compose the largest group of users of construction equipment. You are the builders of our nation. You occupy a most important position in the over-all economy of this country. You must not be, and will not be let down in your need for equipment, the working tools of your profession. Many of you will be engaged in building off-shore installations which, incidentally, is the only type of work at present which provides a contractor with a priority that may be extended to purchase equipment. Nothing is available for domestic work yet. However, I feel satisfied that there will be a sufficient number of highly essential projects, aside from the military construction, to keep all of you occupied in the years ahead.

At this point, you are no doubt beginning to wonder, "Just what *is* the outlook for construction equipment?" I don't blame you, after all the "pros" and "cons" to which you have just listened. In the hope of getting a better answer for you on the outlook for the various types of equipment, an "SOS" call was sent out to a few of our manufacturers.

Motor Graders—Our industry produces an average of about 8,000 motor graders of all sizes per year. It is estimated that the military may require about 6,000 this year and perhaps 3,500 to 4,000 per year afterward. Depending upon the amount of steel and components allocated, there should be a sizable number for civilian needs—but far under the level of 1950.

Contractors' Pumps—At the present time, the industry is booking an unusually large number of orders for drainage pumps used in the construction industry. This volume results from the large number of heavy construction operations recently awarded; their extensive foundation structures require dewatering pumps in large numbers. We are carrying the largest backlog of pump orders in our history and we anticipate a continued heavy demand throughout 1951.

Loaders—Loader availability for essential construction as we see it at the present time should be fairly reasonable in 1951. At least for the time being there are very few direct military requirements for loader equipment. Most loader companies report their product is being supplied for construction and industry. Naturally, receipt of raw materials and components by the loader manufacturers will definitely govern availability of the completed products. Application and use of loaders in construction had been on the increase for many months prior to Korea or July, 1950. Production schedules of many loader companies on the front-end mounted type of both rubber and tracks as well as bucket and conveyor types have been doubled in the past year.

Rollers and Compactors—The principal problem confronting the manufacturers of rollers and compactors is that of securing steel and other scarce materials used in producing the finished product. This is especially true in attempting to supply equipment for civilian use. All manufacturers have more civilian orders on their books for machines than they can possibly secure materials to build. It is reasonable to assume that the roller and compactor industry could supply military needs with 50% of its productive capacity, thereby leaving 50% of the output for civilian use. These percentage figures are based upon the recent military purchasing record and our knowledge of their anticipated requirements for this calendar year.

Tractors—There is every indication that the current heavy demand for crawler tractors by civilian users will continue. The armed forces are buying the three largest models in sizable quantities and, since this business must be given shipping preference over orders that do not carry priority ratings, manufacturers will be hard-pressed to supply their normal customers. On the other hand, it is expected the essentiality of tractors will ultimately be recognized by the Government and that manufacturers will be allowed to produce at capacity. This should make available to civilians well over half the industry's output of crawler tractors.

Scrapers—The scraper and hauling industry has already received military and priority orders of rather staggering proportions, and many more orders are expected in the immediate future. The small proportion of these units available for civilian requirements will, in all probability, be directed to those operations which are related to the defense program, such as iron ore, copper, bauxite, etc. The over-all supply problem actually is aggravated by the inability of manufacturers to secure raw materials, such as plate and structural stock.

Power Cranes and Shovels—After making allowances for known and estimated military requirements, as well as export shipments, and assuming that first, the power crane and shovel industry during the year 1951 can steadily increase its over-all output until it reaches 100% capacity by receiving an ever-increasing amount of materials and components, which means that during the third quarter of this year the amount of such materials and components must be approximately 60% higher than what the industry received during 1950; and second, the supply of materials and components is assured under priorities extended by private purchasers; it is estimated that there will be available for delivery to domestic users, other than U. S. government agencies, power cranes

and shovels in sizes ranging from 3/8 to 2½ cu.yd. capacity inclusive, including rubber tired equipment, between 4,000 and 5,000 units during the year 1951, and the same amount during the year 1952. This compares with deliveries to domestic users, other than U. S. government agencies, during the year 1950 of between 5,500 and 6,000 units. With reference to power cranes and shovels larger than 2½ cu.yd. capacity, it can be expected that they will be available in ever-increasing amounts as compared with what was available in 1950, with production eventually reaching a point approximately 30 to 50% above the output for 1950.

Bituminous Equipment—Bituminous equipment will be in short supply for either one of two reasons:

1. Purchases by armed services. (These are not yet heavy and future plans are not announced.)
2. Shortage of steel and all components. This is already serious and getting worse.

We are in short supply because steel is short and because all components are short. Under any priority system or under a controlled materials plan, all non-defense business will be on a very restricted basis. In the manufacturing business, we always have had to buy ourselves a plant and equip it before we were ready to accept orders. Contractors have been in the fortunate position of being able to depend upon the manufacturer to make prompt deliveries of equipment to a contractor at the time the contractor got a job requiring such equipment. It looks now as though for some time the contractor will have to have his equipment before he can commit himself to any defense job.

Rubber—The entire rubber program has been taken over by the Government, and it is no secret that the production of synthetic has not been coming in as planned, and was considerably lower than expected in January and will so continue through February. Increases are projected for March and April, with full production by the middle of the year. The main reasons for the delay are:

1) Slowness in getting the program started;
2) Diversion of synthetic rubber "feed stocks" to aviation gas;
3) Lack of immediately available trained personnel, and
4) Unforeseen difficulty in reconditioning plants and equipment because of the long shutdown.

As for vegetable or natural rubber—our Government restricted the use of natural rubber and allocated the scheduled production of synthetic rubber. Unfortunately, all the synthetic rubber allocated has not been available, which means the tire industry has been unable to make tires which Government regulations permitted. While at present the rubber industry faces an uncomfortable situation, the future looks bright, indeed. By the middle of March, all synthetic rubber plants in the United States should be in operation, with a total capacity of 1,000,000 long tons of rubber annually. In 1950, the rubber industry imported approximately 720,000 long tons of natural rubber. The Government tempo in the importation of natural rubber this year is considered favorably higher than the 1950 rate. So, for stockpiling, plus civilian and defense requirements, the industry should have more than adequacy in raw materials by the middle of the year.

Off-Highway Trucks and Trailers—At a conservative estimate, this industry now has capacity to handle fully three times the maximum volume attained during the years of World War II. In the present outlook for 1951 it does *not* appear that direct military procurement of "Off-Highway Trucks and Trailers" will be a major factor. A fair estimate would be perhaps 10 to 15% of total production. There will be another important factor, perhaps taking as much as 20%. This is in the field of military operations performed by civilian constructors. The remaining 65% available for industry and civil construction should represent a volume of machinery comparable to normal years, provided maximum manufacturing facilities can be utilized, with sufficient materials and component parts made available for such utilization.

At present, manufacturers are losing production because of material shortages. With no organized plan yet operative that would allocate materials to essential industry, it is a mad scramble to get what materials are available and it is impossible to maintain planned production programs. The result is costly operation and reduced output. It is hoped that an orderly plan may be put into operation by Washington soon that will permit manufacturers in this highly essential industry to utilize their manufacturing facilities to obtain maximum production. In spite of anything that can be done, deliveries will often be disappointingly slow due to huge backlogs of orders that have accumulated. Cooperation of everyone is needed to sift out the really urgent requirements as against the less urgent or stand-by requirements. Along with the federal government's plan of distribution of controlled materials to essential industry, probably should also come control of distribution of finished product to essential construction.

Much as we dislike controls, these steps seem inevitable in a time of national emergency and greatly expanded military program. I would say that it is obvious to all of us as manufacturers, as I know it must be to every contractor, that something sensible and practical has to be worked out that will give our country the mass of construction equipment needed by the military, and then, to make available the balance of the productive capacity of the industry for the vast construction equipment requirements of the contractors for essential construction programs and necessary rehabilitation, maintenance and repair.

Lessons from the past point the way to providing all industry with a Controlled Materials Plan for all essential military and civilian needs with as little disturbance as possible to the over-all economy, rather than the confusion and frustration of no apparent plan at all.

If the manufacturers of the construction equipment industry are to fill even a portion of the needs of the military and the contractor, we must have materials and components. . . . We have the production capacity . . . we have the manpower . . . the ability . . . and the desire to serve.

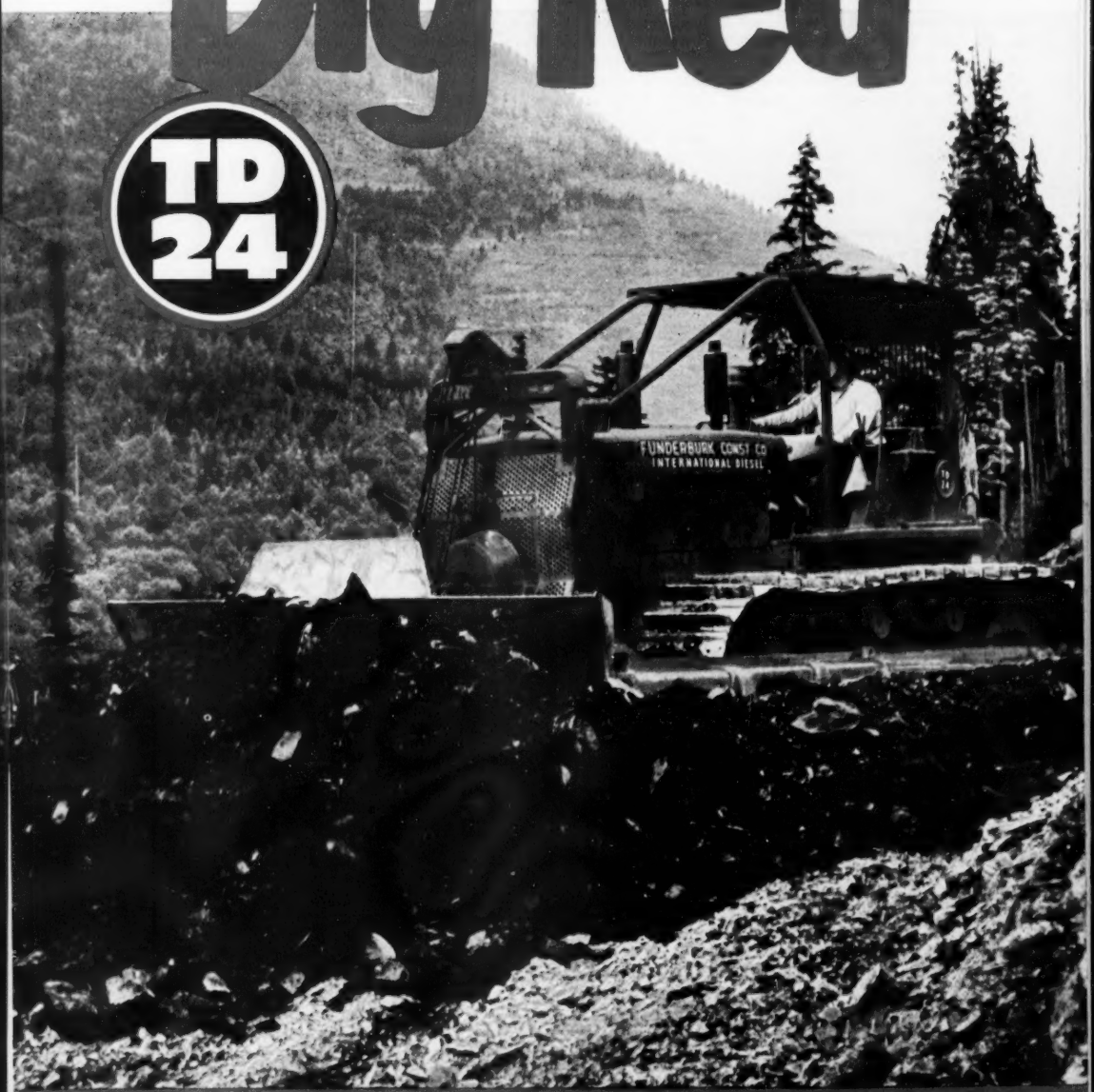
The newly rearranged Construction Equipment Division of NPA is doing its utmost to relieve the shortages which are already causing slow-downs and possible shutdowns in the industry if action is delayed.

We must all face the fact that a practical Controlled Materials Plan is the first order of business for NPA, if you, as well as the military, are to benefit from the full productive capacity of the construction equipment industry.

We have confidence that eventually sound judgment will prevail. It must if we are to remain strong and able to fill your needs for equipment.

"Big Red"

TD 24







Beats Blue Mountain

Read how the International TD-24 pays off, helping build mountain-top radio station.



Out near Seattle rise two 3,000-foot peaks that have suddenly become mighty important. Blue Mountain and Wheeler Mountain, a mile apart, are the bases for new antenna towers of what will be one of the most powerful radio stations ever built.

Toughest part of the construction job was building roads up the mountains. First the Funderburk Construction Company conquered Mt. Wheeler. Then they bought a new International TD-24 and started gouging out the rocky road to the top of Blue Mountain. And with the big red champ on the job, they moved faster, easier, more profitably.

"It's the TD-24's power and Planet Power steering that pay off," says Ed Funderburk. "The TD-24 stays up in the bank easier and pushes bigger bladefuls farther than any other tractor can. This means lots more material moved at the end of the day."

It means more work done on any job. See for yourself. See your International Industrial Distributor and get the real low-down on the TD-24. And check up on the service your distributor can give you over the hard-working years ahead. With factory-trained mechanics and ample shop facilities, backed up by International's strategic network of parts depots across the country, your International Industrial Distributor is all set to keep your International power on the job for you and the nation!

INTERNATIONAL HARVESTER COMPANY
CHICAGO 1, ILLINOIS

TOP THIS ONE! Building a 14-mile road to "top" Blue Mountain means dozing down 250,000 cubic yards of material—mostly rock. It's a job that calls for the brute power of the world's most powerful crawler—the International TD-24.

RECESS FOR THE CHAMP! It's child's play for Ed Funderburk's TD-24 when the skinner lays off dozing long enough to pull stumps from the new road's right-of-way.



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POWER THAT PAYS





A.G.C. Legislative Program Reviewed at 32nd Convention

• Maxon Reports on Current Proposals

» A REVIEW of the association's legislative program was presented to the 32nd annual convention of The Associated General Contractors of America by Glen W. Maxon, Dayton, Ohio, chairman of the Legislative Committee.

"It is important to note," Mr. Maxon reported, "that we now have to give constant attention to two types of legislation: the type made by the Congress, which, of course, is normal procedure; and the type consisting of executive orders, regulations, controls and mandates issued under the vastly expanded power conferred upon the administration.

"The conventional type of legislation is subject to hearings by the committees with opportunities presented to industry for the presentation of testimony.

"The second type is more autocratic, and although in matters of major importance industries involved are consulted, the administrative agencies issuing the orders are not bound by this advice. There exists a vast amount of uncertainty and confusion concerning the administration of this second type of legislation, and this situation demands the most alert attention of the national staff."

Association Policy

In reporting on the committee's actions for the year, Mr. Maxon stated:

"Your Legislative Committee has continued its functions of studying and making recommendations on measures of particular interest to general contractors, and the staff has been in daily contact with the Capitol to keep abreast of developments. It has presented the association's views when deemed desirable, and has informed the officers, committee members, directors and the membership of significant developments in order that they could present their views to their representatives in Congress.

"The association's policy has been consistently to present factual information to the Congress, to make recommendations that are in the public interest and to conduct its relations in such a manner as to reflect credit on its membership."

After reviewing legislation last year, Mr. Maxon commented on bills before the present session of Congress in which the industry is interested. "One measure," he stated, "to reactivate the War Damage Corporation was introduced in the last Congress at the request of the association. It had been passed by the House in the closing days of the special session, and was brought up on the Senate floor, but was objected to on the grounds that there was not sufficient time to consider it adequately.

"A number of insurance companies had requested the inclusion of reinsurance of workmen's compensation to cover death and injury resulting from the same causes of injury to property. Amended bills have been introduced in this Congress, and early action is expected.

"While the introduction of resolutions is not in the province of this committee, it was the sense of members that action should be sought now on the enactment of legislation to take care of property damage, while also cooperating with the insurance companies in their efforts to obtain protection in the personnel field."

Association action on the bill for contract renegotiation was reported by Mr. Maxon. No open hearings had been held on the bill before it passed the House. The A.G.C. presented testimony to the Senate Finance Committee and made recommendations for equitable treatment of construction contracts.

Two A.G.C. recommendations were included when the Senate passed the bill. One would limit renegotiation to contracts "having a direct and immediate connection with national defense," and the other exempted "any contract with a department awarded as a result of competitive bidding for the construction of any building, structure, improvement or facility."

The recommendations were made because, under terms of the bill as passed by the House, government contracts which had been awarded after advertising long before the Korean war would be subject to renegotiation even though the keenest of competition had prevailed in the bidding.

Renegotiation Now Law

The law providing for the renegotiation of contracts which have "a direct and immediate connection with national defense" by a five-man independent board was signed by the President March 23.

Public Law 9 does not affect contractors whose defense work amounts to less than $250,000 a year.

The Renegotiation Board is to be an independent body in the executive branch of the government with the authority to "make final and other agreements with a contractor or subcontractor for the elimination of excessive profits" upon the terms the board deems advisable. When a contractor is not satisfied with the board's determination of excessive profits, he may file a petition with the United States Tax Court for a redetermination. His case will be treated independently and not as a review of the board's ruling.

The board is given discretionary authority to exempt from renegotiation contracts which have provisions adequately preventing excess profits, which require secrecy, which would not be administratively feasible to renegotiate, or which are performed outside the United States.

In determining excessive profits the board will recognize the efficiency of the contractor and the quality of his work. Also "the reasonableness of costs and profits, with particular regard to volume of production, normal earnings, and comparison of war and peacetime earnings; the net worth, with particular regard to the amount and source of public and private capital employed; the extent of the risk assumed; the nature and extent of contribution to the defense effort including inventive and developmental contribution and cooperation with the government and other contractors in supplying technical assistance; the character of the business, including source and nature of materials, complexity of manufacturing technique, character and extent of subcontracting, and rate of turnover; and such other factors the consideration of which the public interest and fair and equitable dealing may require, which factors shall be published in the regulations of the board as adopted."

The interest rate on unpaid renegotiation indebtedness is four per cent.

A.G.C. Proposes Changes in Tax Law

» THE House Ways and Means Committee has concluded public hearings on tax increase proposals and will start drafting a bill early this month.

The hearings dealt principally with the problem of increasing revenues by $16.5 billion needed to meet on a pay-as-you-go basis the 1951-52 fiscal budget of $71.6 billion recently outlined by President Truman.

Managing Director H. E. Foreman presented testimony to the committee on March 16, on behalf of the members of The Associated General Contractors of America. Major points in his testimony follow:

1. A general contractor should be allowed to carry back the maintenance and repair costs for his equipment to the preceding year, charging the expense to the taxable year in which it arose and not in which it was paid. Generally, only minor repairs are made on the site and not until the winter of the next year are major repairs made and paid for.

2. A general contractor should be allowed more liberal depreciation allowances on equipment and a carry-back and carry-forward of all unused depreciation allowances for a period of at least two years thus offsetting to a small degree the special hazards involved in his operations. Unlike the equipment of a manufacturer, the general contractor's equipment cannot be housed or easily maintained, is subject to rugged use and long hours of continuous operation.

3. Section 3475 of the Internal Revenue Code which refers to the transportation of property tax should be amended so as not to apply to the use of motor vehicles by contractors for moving earth, rock or other excavated material within the boundaries of or incidental to a construction project. This amendment would permit uniformity of administrative rulings, eliminate conflicting court decisions and end the confusion that exists in the highway and heavy divisions of the industry.

4. "Many inequities and hardships have been caused by the recently enacted excess profits tax law. In order to obtain some degree of equity in the application of the excess profits tax to the general contractor, the following changes in the existing law are recommended:

"a. Profits from all contracts awarded as a result of competitive bidding should be exempted.

"The normal practice of a general contractor is to sell a completed structure or improvement at a fixed price before it comes into existence. Generally, a purchaser requests several general contractors to bid in competition for the work. The lowest responsible bidder receives the award, and during his operation, any increase in the cost of materials or labor, as well as other factors, is the contractor's responsibility and generally decreases his final profit. It is rare that a contractor's estimate at the time the contract is awarded is the same as when the work is completed.

"b. Profits on all operations entered into at a fixed price prior to June 24, 1950, the date of the Korean invasion, should be exempted.

"The general contractor, because of his custom of doing the work by fixed-price contract, has no means of increasing the amount called for in the contract. It was not possible to foresee the Korean conflict which increased all types of costs in completing projects under contract. In no way can the work involved in these contracts be considered defense work or have any direct relation to the Korean conflict.

"c. Profits on long-term contracts entered into prior to June 24, 1950, which are to be completed subsequent to that date, should be exempted.

"Many general contractors hold contracts pre-dating the Korean conflict. Many of these contracts date back several years and many will require several years to complete. Certainly any profits realized from these long-term contracts cannot possibly be considered 'war profits.' Many of these contractors have already been penalized by the increase in the normal tax rates now in effect. This applies particularly to the contractors who report their income from long-term contracts on a completed contract basis, that is, at the time the work is completed. These contractors already face substantial reduction in anticipated profits from long-term contracts because of increased costs that have already taken effect. Many general contractors operating under long-term contracts only begin to realize their profits when the project has been under way for quite a long period.

"d. Profits on all negotiated fixed-price contracts which are subject to renegotiation should be exempted.

"The purpose of renegotiation legislation is to recapture any abnormal or excessive profits attributable to the emergency. During the last war general contractors engaged in war work were required to refund a very large part of their profits and were further subject to an excess profits tax. Inasmuch as renegotiation is not based on income after taxes, many contractors find themselves in financial difficulties by reason of additional taxes levied when their tax returns are examined."

Changes in Housing Bill

Legislation to provide housing and community facilities for workers in new or expanded defense production plants has met strong opposition in Congress.

The House, by a vote of 219-170, refused to consider H. R. 2988, which had been introduced at the request of the President, and returned it to the Banking Committee. The committee is expected to consider a substitute bill, H. R. 3197, early this month.

The Senate bill, S. 349, has been approved by the Senate Banking Committee and will be moved to the floor for debate soon after Congress returns from Easter recess.

The bill as approved reduced provisions for federal mortgage insurance authority from $3 billion to $1.5 billion.

Funds for community facilities and services for which the President had allotted $125 million in his 1952 budget are limited to $60 million for federal grants for schools, streets, sewers and other facilities in defense areas.

Other provisions include $50 million for construction of homes in less populated areas where private capital is not likely to provide for necessary housing; $15 million for loans to manufacturers of prefabricated houses for the purpose of keeping the industry's present capacity available for future defense needs; and $10 million for the federal acquisition of land to prevent speculation.

The Senate Banking Committee has also recommended a system of rent ceilings for defense housing, the major portion of which is expected to be permanent rather than temporary and constructed by "private housing enterprise."

SKYWAYS

AIRPORTS are built with aggregate. Highways, dams, factories, bridges . . . practically *all* construction projects . . . begin with aggregate. But for the UNLIMITED construction that meets today's industrial and military needs, millions of tons of aggregate must be produced *at increasingly lower cost!*

Cedarapids equipment gives you the high capacity and economical operation that reduce per ton production costs . . . it assures the high quality finished products that meet exacting specifications . . . it brings you OPPORTUNITY UNLIMITED for your share of profit on future big jobs.

Whether you need single units, complete aggregate or asphalt plants, or soil compaction machines, be sure you have the best . . . see your Cedarapids distributor for the whole story.

Cedarapids
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Quality EQUIPMENT



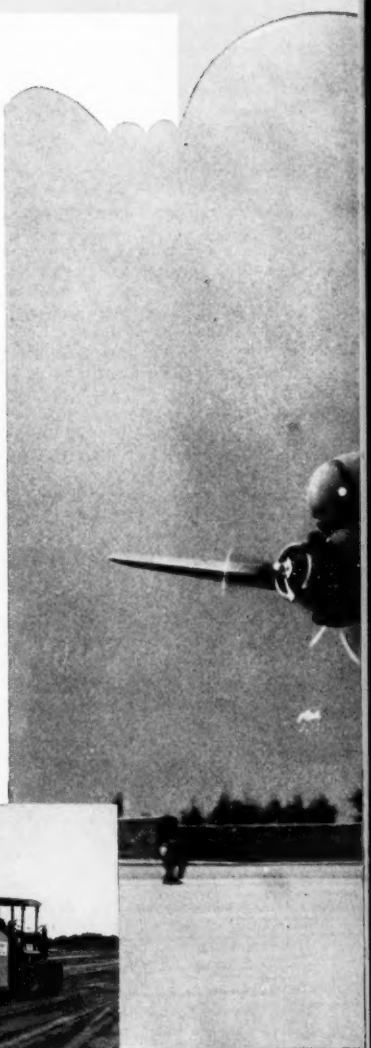
MASTER TANDEM

HERE'S the largest of the Cedarapids complete portable crushing and screening plants . . . a high capacity giant when big volume is required. For average size gravel jobs, use the Junior Tandem . . . for the smaller jobs, pick the Pitmaster. Add a Cedarapids Portable Primary and you have a rock plant. There's a size and type of Cedarapids equipment, for aggregate or black top, to meet any specification, any quantity, every pocketbook.



VIBRATORY SOIL COMPACTOR

THE Cedarapids Compactor operates on an entirely new principle...the application of controlled vibration through the pneumatic tires of a heavy roller. This powerful compacting action saves time and dollars by reaching specification densities in fewer passes.



UNLIMITED

THROUGH LOW COST AGGREGATE



IOWA MANUFACTURING COMPANY

Cedar Rapids, Iowa, U. S. A.

THE IOWA LINE *of Material Handling Equipment Includes:* ROCK AND GRAVEL CRUSHERS • BELT CONVEYORS • STEEL BINS • VIBRATOR AND REVOLVING SCREENS • UNITIZED ROCK AND GRAVEL PLANTS • FEEDERS • PORTABLE POWER CONVEYORS • PORTABLE AND STATIONARY STONE, GRAVEL AND SAND PLANTS • REDUCTION CRUSHERS • BATCH TYPE AND VOLUMETRIC TYPE ASPHALT PLANTS • DRIERS • DUST COLLECTORS HAMMERMILLS • WASHING PLANTS • VIBRATING SOIL COMPACTION UNITS • DOUBLE IMPELLER IMPACT BREAKERS

Progress Reported in A.G.C. Public Relations Program

• Action Starting at Grass Roots Advocated

» PROGRESS in the association's public relations program was reported to the 32nd annual convention by acting Chairman A. N. Goldberg, New Orleans, of the Public Relations Committee, which held two meetings in Boston prior to the convention.

In opening the report, Mr. Goldberg on behalf of the committee, paid tribute to the late Gayle G. Armstrong, Roswell, New Mexico, who was chairman of the committee and nominated for A.G.C. vice president at the time of his death.

On February 24 the committee held a joint meeting with a group from the Secretaries' and Managers' Council. Mr. Goldberg reported: "There was a thorough discussion of all activities of our various groups and their connection with public relations. It was the majority thinking that proper public relations should start at the grass roots, at the local level, and that they can be served most effectively by and through the chapter managers. The managers group agreed to assume some responsibility for the functioning of their members, and your committee agreed that any program of public relations required a close association and cooperation with the managers' group."

At its regular meeting February 25 the committee reviewed thoroughly work of the national public relations program. Mr. Goldberg reported: "A thorough consideration and discussion of the *National News-Letter* developed that it is popular, of excellent composition, informative and a desirable and important function. It is recommended that consideration be given to a more frequent issuance of either flash releases or distribution of more important bulletins to the membership during these most difficult and constantly changing times.

"The committee reviewed the program of advertising and publicity. This has a definite relationship as far as the news media are concerned. The program of advertising is necessarily limited because of the compartively small budget and the circumstances of the moment. It is being carried out in a thorough and professional manner with the consultation of top professional consultants.

"It is the thinking of the committee that there should not be too much emphasis on construction as usual, but that there should be agressive effort to impress the public with the ability, capacity, responsibility and integrity of the individual A.G.C. member."



George Heller, (left) presents check for the Constructiondizing Award to President Arthur D. Ladehoff of A.G.C. of Iowa while Executive Secretary O. W. Crowley looks on.

The committee discussed THE CONSTRUCTOR and declared it an excellent publication. It suggested that members consider receiving copies of the publications at their homes where they would have more opportunity to read the important information carried.

It was brought out continually, Mr. Goldberg reported, that constant and consistent contact with members and member groups could do more to foster internal good relations and good public relations than almost any other effort. The committee suggested that directors keep in contact with chapters in their states, and that the chapters invite directors and committee chairmen in their state to their meetings, and if possible make them ex-officio members of their boards.

The committee voted an expression of appreciation to members of the national staff and their consultants, the Lewis Edwin Ryan agency. Members of the public relations staff are Wm. E. Woodruff, Wm. G. Dooly, Jr., and Nicholas D. Fratt.

The committee also expressed its appreciation to the Secretaries' and Managers' Council for its cooperation.

Iowa Program Wins Award

A comprehensive program of improving relationships between highway contractors and highway officials and of encouraging highway construction won the annual Constructiondizing Award for The Associated General Contractors of Iowa.

By personal interview, letters and telephone calls representatives of the chapter contacted officials in every county in the state. The contacts were made for the purpose of promoting better public relations, expediting highway matters, and solving the problems of officials, both public and private.

A special committee studied highway finances and programs for 40 counties, and aided by an advertising agency prepared articles and advertisements for newspapers. In addition, the association's official publications were furnished regularly to highway officials.

This activity helped to increase the volume of secondary road construction put under contract, and developed much good will for the contractors.

The program was under direction of President Arthur D. Ladehoff, the directors, and Executive Secretary O. W. Crowley.

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THE FACILITIES of National Surety have been used by the construction industry for many years. As a result of this close association, we know well the skill, ability and accomplishments of the nation's construction men who are mobilizing again for an all-out speed-up of industrial expansion and emergency defense building. Our country can have confidence that they will prove equal to this huge task.

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Machines are being mobilized. "Caterpillar" products are wearing olive drab once more. Because of large military demands your present machines may have to work longer than you had anticipated.

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1. **Follow a sound program of operation and maintenance.**
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A.G.C. Approves Wage Adjustment Board

• Association Participation Is Authorized by Convention

» PARTICIPATION of The Associated General Contractors of America in a national wage adjustment board to administer the wage stabilization program in the construction industry, under policies of the Wage Stabilization Board, was approved by the 32nd annual convention.

Approval also was given to A.G.C. negotiations with the Building and Construction Trades Department of the American Federation of Labor and government agencies, leading to stabilization of working conditions in the industry during the period of the mobilization program and to establishment of means for handling disputes in the industry.

These actions were taken upon recommendation of the Labor Committee. A review of the committee's work for the past year was given in the report presented by Arthur H. Wells, Chicago, vice chairman. He reported for Chairman Lester C. Rogers, Chicago, who had just returned from Geneva, Switzerland. Mr. Rogers and S. A. Fuller, Pittsburgh, had been construction employer representatives at meetings of the International Labor Organization.

Wage Adjustment Board

Mr. Wells recalled that during World War II there was established, after several preliminary steps, the Wage Adjustment Board for the construction industry which did administer the wage stabilization program for the industry under general policies of the National War Labor Board, and did handle disputes in the industry. It was composed of equal numbers of public, labor and employer representatives.

The association's negotiating subcommittee, Mr. Wells reported, has consulted with labor representatives and the representatives of national associations of specialty contractors who participate in the National Joint Board for the Settlement of Jurisdictional Disputes and has recommended a plan for a wage adjustment board to the government.

During World War II, employers did not participate in developing stabilized working conditions and means for handling disputes in the industry. During the present emergency, Mr. Wells reported, the committee felt it highly desirable that employers do participate in the development of such plans and programs, and the A.G.C. has negotiated with labor, other employer groups and government agencies.

Members of the negotiating subcommittee which have carried on much of the work are the chairman and vice chairman of the committee, former chairmen Carl B. Jansen, Detroit, Mr. Pickett and Morris E. DeWitt.

The resolution adopted by the convention gave the Executive Committee authority to approve the agreement with the proviso that it shall be binding only upon such members as specifically stipulate to be so bound.

Internal Disputes

Establishment of a Labor Policy Disputes Committee also was approved by the convention. The purpose of this committee is to try to adjust, without formal procedures, disputes arising between chapters, the members of other chapters or national members in matters concerning the support of local labor policies.

The plan recommended by the Labor Committee is that disputes which arise out of conflicting labor policies and which disrupt or tend to disrupt conditions in an area may be submitted to the special committee through the national office. The chairman of the Labor Committee is to appoint a special committee for each dispute, selecting so far as possible members of the Labor Committee and members of the Governing and Advisory Boards in the area.

The committee held a day-long meeting preceding the convention.

Mr. Wells reported that the committee had determined that additions would have to be made to the staff in order to handle the extra work to be brought about by the establishment of a wage adjustment board and to keep the industry members informed about all cases.

Special commendation was given to Roy E. Pickett, Detroit, former committee chairman, who has been a member of the National Joint Board for the Settlement of Jurisdictional Disputes, and has weekly come to Washington and spent much time on its operations. It was reported extra expenses could be expected during the year in operations of that board.

Assistant Managing Director J. D. Marshall discussed various labor problems at the division meetings during the convention. He was assisted by William E. Dunn, and by Edward T. Kelly, of the staff.

Wage Stabilization Board

The need for a wage adjustment board to administer the national wage stabilization program in the construction industry became more apparent last month as various wage stabilization regulations were issued by the Economic Stabilization Agency.

The regulations issued by Administrator Eric Johnston have been designed to govern all employers. As has been demonstrated in the past, they require clarification and interpretation to fit construction operations.

Until labor representatives return to the national Wage Stabilization Board and other mobilization agencies, there is little likelihood that the WSB will take actions to clarify and interpret the regulations for construction.

It has been estimated that at least two weeks will elapse after labor representatives return to the WSB and it has been expanded to double its previous size, before a wage adjustment board for the construction industry can be established.

The expanded WSB undoubtedly would want to review the wage regulations which have been issued, and possibly make some changes. A special wage adjustment board for the construction industry would then have to interpret these regulations for their application to construction operations.

By late March it appeared that it might be May before such a construction board could be in operation and give much clarification to the regulations.

For the present, construction employers have no board to apply to for the right to pay wage increases which require prior approval. It is desirable for both labor and employers to make no changes in wage rates until a suitable board is established for the industry, excepting in the few cases where increases may be made without interpretation or prior approval.

Construction's Role in Crisis

• Industry Must Have Voice in Planning for Defense

By Joseph D. Keenan

Secretary-Treasurer, Building and Construction Trades Department, A.F.L.

» FIRST of all, I feel deeply honored to be invited to address this great convention. I want to bring to you the best wishes of Dick Gray, president, and of the members of the Executive Council, and presidents and members who make up the international unions that form the Building and Construction Trades Department.

I attended one of your conventions some 10 years ago, and I am happy to be here today, but my being here was caused by the passing of one of the dearest friends I ever had in the person of Herb Rivers. I know that he would have liked to be here today, greeting many of his dear friends.

As your chairman has told you, I came to Washington in 1940 at the request of President Green, to represent the American Federation of Labor on the then National Defense Council. Coming out of the building trades, it was only natural that I became interested in the part that American labor could play in bringing about the completion of the program planned at that time, and, because of my association with the building trades, I spent a great deal of time working with the officers who were in charge of that building program for the services.

During that period, I had occasion to meet with many of you who are seated in this room. Everything was in a confused state in 1940 when we started this program. We had been through a depression. The building trades industry had sunk to an all-time low as far as dollar volume was concerned. Many of the mechanics who years before had learned the trade, who had looked forward to staying in it for their entire lives, had to leave and find other occupation because there was no work in their trade. Consequently, we had to go about the country trying to find those men in order to develop organizations to bring about this great program which was planned at that time.

In 1939, I think the dollar volume of construction was about 8 billion dollars, with a total of about 1,200,000 mechanics doing that work.

In 1942, it was blown up to 15 billion, and we used 2,300,000 mechanics, and we thought many, many times that we had reached the point where we could not take on any more.

In 1940, we had no cantonments. I believe we had but two powder plants in this country, one at Picatinny and one at Indian Head, Maryland. It was necessary to start from scratch. I can remember those days on the Defense Council, when we were thinking about getting men to build the camps, powder plants, shipyards, airplane fields and the many other projects that were necessary in order to bring about the making of materials so we could supply our men and the men of our allies.

Order L-41

In the early days, we knew this was going to tax the industry to the utmost, but we were not consulted when the OPM put on that most restrictive order known as L-41. We accepted it at that time, although no one in the building industry was consulted. As it happened, just one hour before it was issued, I learned about it. I talked to some of the men in the building trades, but it was too late. We accepted it. We accepted it as an industry, and we felt that it was necessary in order to do the job.

We were sure that when the time came, and the program was completed, there would be some consideration given to relaxing of it so we could keep our organizations together and go on and try to get in shape to reconvert and return to a peacetime economy once more.

Industry Not Consulted

This industry was left out of the act in the last war and to my knowledge they were never consulted nor their advice sought as to ways and means of keeping our highways, our streets and structures in repair and I am afraid it will be duplicated in this emergency if we do not make ourselves heard. A duplication of the happenings of the last war where just minor repairs were made in this emergency which we are talking about today, which may be 10 or 20 years, can easily develop so that we will have utter chaos.

Highways

At the convention of governors a year or so ago, one of the principal topics was the condition of roads brought about by the lack of maintenance during the war period, what could be done about raising finances in order to make the corrections necessary. It was pointed out there that because of lack of maintenance the roads were ruined and that meant building new ones. If one must realize that corrections were never made and we are now going to heap the past conditions on the present ones it will easily lead into a state of utter confusion. This project should be turned over to the construction industry to plan. It must, first of all, be let in on the program of what will be the needs of the military and then they can plan to take care of these important problems without interference to the war effort. This to me is common sense.

Our plea fell on deaf ears, and nothing was done. We tried to point out, as did your men here, Doc Foreman and Jim Marshall, we spent many days trying to find a way to see if we couldn't keep this industry together in order to take care of the conditions which had developed because of lack of maintenance and other things during the previous five years.

We had just about started talking about reconversion, then the Bulge came upon us and, of course, everything was shut down once more.

Put Off Again

After the repulse at the Bulge and we started to move on, and Germany fell, we started once more. They said, "Well, now, we have a big job to do in Japan; it will probably mean taking our eyes off the ball if we do anything about it." Japan fell, and we were not prepared although many knew of the bomb.

During 1944 construction dropped to five billion. It took only 1,075,000 men to do the work; the industry had completed its job, so to speak, as far as the war effort was concerned. There would be an emergency here and there, but to keep the entire industry at work on military activities was impossible. We knew the time had come to be considering reconversion and the part that the building and construction

trades would play in returning to a peacetime program. In our early discussion it was requested of us to do no talking about it until after we had landed in Europe. D Day came on June 6, 1944, and we knew that there was quite a great deal of resistance. There was a time when there was doubt as to its success, but after the St. Lo break-through our successes were great and an effort was made to have consideration taken over relaxing L-41.

This Time

As an industry, we have an obligation to see to it, if this war should last for 10 years, that the same policy is not used as was used in the last war, neglecting almost everything on the home front, as it would cause untold damage which could not be repaired and our economy would fall apart.

During the last war our local transportation had nearly collapsed, our roads were falling apart. Today in practically every city in the United States it is almost impossible to drive because of the congestion. For six years nothing was done, just the minimum of repairs was made on roads, and nothing was done in considering the increased usage of the number of cars in operation. It caused a condition today in which the majority of the roads in use are just about 10 or 12 years behind. If this emergency is to last for 10 years, this great industry, if it is not considered and taken into the program, cannot meet its responsibility as far as construction is concerned and aid in a great way in preventing what happened in 1940-1946.

Industry Should Participate

We, as an industry, have a right to get into this program. We have a right to add our know-how, in order to try to maintain a balanced economy in our field if possible. I am doubtful whether the building construction industry will be called upon to go to the limits we had to go to in 1940, 1941, 1942 and 1943. Admiral Jelley told you that the construction they did in 1940, 1941 and 1942 was good construction. It is still in place and it can still be used.

In the next 12 or 14 months, we may have a steel program, we may have an aluminum program, we may have another cantonment program, but I know we can take care of any situation which confronts the country in the building field. I know as an industry it will make any sacrifice, both by the employers and the workers, in order to accomplish whatever requests are made of us.

Voice in Planning

We, the workers in this industry and the employers, must be given a voice in the planning so that we can maintain our organizations in case we do get hit with the atomic bomb. It is the people in this room who have the organizations necessary to correct the damages which are caused by the bombs which will be used if our enemies come—God forbid. It is the building industry which must use the equipment, in order to clean up the debris and set in motion repair of the sewage system and the water and the other things which are so vitally needed in keeping life and body together.

This is a very, very important convention, because we are going into another crisis. We don't know where we are going but we have a job to do. We have done it in the past and we will do it in the future.

Joint Committee Proposed

I urge the building and construction industry to aid the building and construction trades in setting up a joint committee to serve as an advisory group at the different agencies in Washington. I have talked about this committee with Doc Foreman and Jim Marshall. It should be composed of members of the contractors' association and the specialty contractors who make up the building group. I am sure that if we are properly organized our plea will be listened to and I am sure we can contribute no end to simplifying the many, many problems which will face these agencies in the period to come.

In many cases, the committees which make the decisions know nothing about building and construction. The orders affecting the industry are sweeping and hit every branch of it. It is wrong and the industry has a right to be heard before actions of this kind are taken.

The American building and construction trades groups are aware of the part they must play in the economy and they are willing and ready to do everything in their power to make it possible to deliver the goods to the Army, the Navy and the other forces and our allies all over the world.

Elections were ordered April 2 by the National Labor Relations Board among employees in a single craft in the construction industry. Elections were requested by locals of the A.F.L. plumbers' union in Baltimore and Olean, New York, although eight other A.F.L. international unions asked the board to refuse elections as a matter of policy.



Joseph D. Keenan, left, Secretary-Treasurer, Building and Construction Trades Department of the American Federation of Labor, talks with A.G.C. Assistant Managing Director J. D. Marshall after addressing the convention.

3 TOURNAROCKERS *on Oregon*



Rig places 12 yards of material on cliffside fill in 25-to 35 seconds. In addition to their 3 Tournarockers, the contractors' earthmoving fleet includes 14 Super C Tournapulls, 3 LeTourneau Wagons, and 10 Model W Carryall Scrapers.



Oversize, disc-type air brakes on all 4 wheels (4176 sq. in. total braking surface) let Tournarocker operators drive down narrow 30% grades with complete safety and confidence.

Lookout Point Dam will be completed across the Middle Fork of the Willamette River near Lowell, Oregon, in 1953. One section of work now in progress involves relocating 2 miles of State Highway 58 and 2 miles of Southern Pacific rail line above the reservoir area at Goodman Bluff. Approximately 1,236,000 cu. yds. of rock and 917,000 cu. yds. of common earth have to be moved... most of it from canyon slopes ranging from 1:1 to vertical. Leonard & Slate Oregon Ltd. and E. C. Hall Co. of Portland share the 2,153,000-yd., 18-month federal contract... and have assigned the most difficult hauling on it to 3 LeTourneau 16-ton, rear-dump Tournarockers. Here's typical performance:

Make 24 trips hourly on 3200′ cycles

On one section of the job, the Tournarockers have 400′ of one-way travel down 30% grade... 1000′ along existing highway through heavy traffic... and 200′ on the rough unfinished fill. The entire 0.3 mi. stretch is narrow and

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- ☐ 35 m.p.h., 16-ton Tournarocker
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lick 30% grades Highway



Tournarocker turns around within 13.9% splits quickly under rock shovel. Ordinarily, each "C" is loaded with 12 pay yards of rock and clay overburden in 2½ to 3 minutes. Combined production for all 3 units averages 2400 yards per day.

winding . . . there are some delays for traffic . . . and "elbow room" at both shovel and dump is severely limited . . . yet each "C" completes a 3200′ cycle every 7 minutes.

3 units move 288 yds. hourly

Average haul speed, including complete stops for one-way traffic, is 9.8 m.p.h. . . . and average shovel-load is 12 pay yards. In one hour, each Tournarocker makes 8 trips . . . delivers 96 pay yards. This time study figure checks closely with over-all job production records, which show that on similar hauls, with 2 Tournarockers handling output of one shovel, each LeTourneau rig has been averaging approximately 125 yards per hour.

Speed production during wet weather

One of the biggest problems on the Lookout Point job is the rainy season, which is usually 6 months long. Clay in the gravel-clay mixture is extremely slippery when wet, and makes a serious problem on the steep, narrow and winding haul roads. To meet these conditions, Tournarockers offer a number of distinct advantages. Their big 21.00 x 25 low-pressure tires improve traction. Power-proportioning differential applies up to 4 times more power to the wheel on firmest footing. Positive power steer shifts footing as needed for better pull. Powerful 4-wheel air brakes and Electrotarder provide ample braking action on steep grades. Front-wheel drive on prime mover lets the "C's" dump safely over the edge of fills because drive wheels are always on firm ground. Simple electric hoist raises body to vertical position . . . streamlined bowl clears even the wettest, stickiest loads in a few seconds.

Important savings for you

These same Tournarocker features which are helping Leonard & Slate and E. C. Hall lick steep slopes and rough going on this Oregon project, offer new low-hauling costs for your jobs, too. Ask your LeTourneau Distributor about this 16-ton, rear-dump hauler. He can also give you complete information on 9, 35 and 50-ton Tournarockers. You get both job and profit insurance with all Tournarocker sizes, because you can use the 2-wheel prime mover to power other interchangeable units, including Carryall Scrapers, bottom-dump hoppers, flat-beds, haulers, and cranes. Call him, or write TODAY.

LETOURNEAU PEORIA, ILLINOIS **TOURNAROCKERS**

HIGH SPEED on RUBBER PLUS TRACTION ADVANTAGES of a CRAWLER

Building Contractors Find Material Orders Delay Jobs

- A.G.C. Division Studies Effects of Metal Controls
- Cites Single Contract Benefits, Apprentice Need

» THE effect which orders controlling uses of critical materials will have on the completion of building projects, the need for apprentice training, and the need for continued national and local work directed toward the award of one single general contract for building projects were among the principal topics discussed by the Building Contractors' Division at its two-day meetings in Boston.

Officers elected by the division for 1951 were H. C. Turner, Jr., Turner Construction Co., New York, as chairman, and W. Murray Werner, The Werner Co., Shreveport, Louisiana, as vice chairman.

D. A. Harmon, Oklahoma City, was given a rising vote of appreciation for his work during the past year when he retired as chairman of the division.

Panel on Controls

William Stanley Parker, chairman of the Committee on Contract Documents of The American Institute of Architects addressed a luncheon meeting on A.I.A. standard contract forms. Excerpts from his address are on the following page.

With John L. Haynes, director, Building Materials Division, National Production Authority, the division explored thoroughly the effect of the various NPA controls on construction. Mr. Haynes answered many questions on the operation of present orders and the possibilities of additional ones in the future.

Following a discussion of the effects which orders limiting the usage of particularly copper and aluminum will have in delaying the completion of projects already under way while projects are redesigned for materials which can be secured, the division recommended a strong resolution which was subsequently adopted by the convention urging the NPA to give serious consideration to the effects of these orders on construction projects.

Emphasize Single Contract

Discussion was given to the efforts being made in many localities to secure the award of separate contracts for the mechanical portions of building projects. Numerous instances were cited of how this practice had been costly to the owner and to the contractor and not in the best interests of the public.

The division voted that nationally and locally every effort be exerted to preserve the use of the one over-all general contract. To explain the advantages to the owner of the award of one contract, the association last year published the booklet, *Undivided Responsibility—Key to Lower Construction Costs*, and an advertisement based upon it.

Voss Talks on Education

Professor Walter H. Voss of the Massachusetts Institute of Technology in a brief address stressed the desirability and value to the construction industry of providing jobs for engineering students during summer vacations so that they can receive practical experience along with their academic training.

He also asked A.G.C. cooperation and participation in the conference which M.I.T. is sponsoring next August on pre-stressed concrete and its uses.

Assistant Managing Director J. D. Marshall outlined actions being taken by the government, the A.G.C. and others leading toward the establishment of a wage adjustment board to administer the national wage stabilization program in the construction industry.

Apprenticeship Discussed

A discussion of the need for apprentice training was led by Fred Fisher, Houston, vice chairman of the Apprenticeship Committee. Representatives from various parts of the country exchanged experiences. Herbert Connor, State Apprenticeship Superviser for Massachusetts, took part in the discussions and explained the progress being made in the state.

H. B. Alexander, Harrisburg, Pennsylvania, chairman, and John H. Dahlman, member of the Accident Prevention Committee, led a discussion on accident prevention, and Mr. Dahlman presented awards to winners in the building division contests.

W. A. Snow, division manager, reported to the meeting on activities of the division for the year, and also gave a report on recent activities of the National Joint Cooperative Committee maintained with The American Institute of Architects.



Officers of the Building Contractors' Division for 1951 are H. C. Turner, Jr., Turner Construction Co., New York City, chairman, center, and W. Murray Werner, The Werner Co., Shreveport, Louisiana, vice chairman, right. W. A. Snow, at left, is manager.

A.I.A. Standard Contract Forms Discussed

• Parker Outlines Reasons Some Changes Disapproved

» STANDARD contract forms of The American Institute of Architects were discussed before the A.G.C. Building Contractors' Division at its Boston meeting by William Stanley Parker, chairman of the institute's Committee on Contract Documents. Excerpts from his address follow:

It is the function of the Committee on Contract Documents to maintain constant scrutiny of the provisions of the standard forms issued by the institute, to receive comments and criticisms concerning clauses that seem to need revision, and from time to time to make recommendations for such revisions as seem to the committee to be desirable. I will refer here only to owner-contractor forms.

Since the war, various suggestions have been received and have been given long, continued and careful consideration. A good many seem to be on the whole undesirable when judged in the light of the basic requirement of the standard form which is devised to be as broadly useful as possible for all types of work in the country.

The committee, as the official custodian, as it were, of the documents feels a very keen responsibility for protecting the documents from unwise amendments that might seriously affect their broad usefulness.

Disapproved Suggestions

With this preamble, let me discuss with you a few of the suggested amendments that the committee does not approve, and also a few of the suggestions I believe the committee may recommend to the Board of Directors of the institute in its annual report this spring.

Article 17, Deductions for Uncorrected Work, of the lump-sum contract form, provides that "If the architect and owner deem it inexpedient to correct work injured or done not in accordance with the contract, an equitable deduction from the contract price shall be made therefor." It is claimed by some that the term "equitable deduction" is too vague and some precise method of evaluation should be used. The same objection is held to the similar phrase in the owner architect agreement to determine payment for various extra services if they occur.

In both of these situations the conditions are indefinite and variable and no single standard of measurement would be applicable. The committee feels that where conditions are variable they can only be appraised on a basis of what is equitable or reasonable in the light of actual conditions in each case. The present phraseology seems proper.

Suggestions were received for amendments to Article 23 "Contractor's Right to Stop Work or Terminate Contract" in order to take care of emergencies arising as a result of decisions of public authorities in time of war or preparation for possible war. The committee has a feeling that Article 23 offers a pretty adequate basis for such action as now phrased.

Article 34, Mutual Responsibility of Contractors, provides that in case of a suit against the owner by one contractor due to damage by another separate contractor the contractor, claimed to be the cause of the damage, should defend the suit at the owner's expense. The owner's contingent liability policy, which he should take out, would in such case take care of defending the suit. The logic of this provision has been explained for many years in institute publications.

Insurance Provisions

A few changes in Article 29, Fire Insurance, will probably be suggested that will make sure that the contractor will be definitely named or described in the policy as one of the insureds.

The committee is preparing a Circular of Information on Insurance, that will indicate the limits involved in the standard provisions and calling attention to the special types of coverage that should be carefully considered and provided for to meet the special needs of each project.



William Stanley Parker, F.A.I.A., Boston, chairman of A.I.A. Committee on Contract Documents, standing left, spoke at the Building Contractors' Division meeting. With him are Chairman D. A. Harmon, Oklahoma City, standing right; Vice Chairman H. C. Turner, Jr., New York City, seated left, and Manager W. A. Snow.

Call for Accent on Apprentice Training

- Emergency Highlights Need for More Active Employer Interest

» THE need for employers to take a more active interest in the training of apprentices has been accentuated by the Korean war, the Apprenticeship Committee reported to the A.G.C.'s 32nd annual convention in Boston.

This is brought about by the fact that young men are being taken into the armed forces from apprentice training programs at a time when the volume of construction required to support the mobilization program is increasing, Chairman Rudolph W. Weitz, Des Moines, reported.

Statistics for 1950 showed that while the number of local joint apprenticeship committees increased 4.7 per cent, the number of apprentices being trained dropped 8.7 per cent.

Mr. Weitz reported that a subcommittee of the Federal Committee on Apprenticeship is giving consideration to means whereby apprentices taken into the armed services could continue to receive on the job training while they were at the same time receiving their military training.

The committee held a day long meeting prior to the convention, during which they had as their guest William F. Patterson, director of the Bureau of Apprenticeship of the U. S. Labor Department. The committee made the following recommendations and observations:

1. Greater active interest in local joint committee work is needed.

2. Local joint committees should exert greater effort to see that all apprentices attend related school training classes.

3. Employers must realize the necessity of joining in every effort to preserve and improve the structure of apprentice training during these times of national emergency.

4. Employers should aid in the temporary deferment of any apprentice actually performing work justifying such deferment.

5. Employer participation and interest should be increased and intensified with respect to both providing on the job training and recruiting new apprentices.

6. Whenever feasible and possible, full time apprentice coordinators should be employed because experience has proved that they are of inestimable value in developing and maintaining adequate programs.

The committee also emphasized that provisions should be made for apprentice wage scales in the predeterminations of prevailing wage rates by the Davis-Bacon section of the Labor Department on projects involving federal funds.

Commendation was given to groups which had given appropriate recognition to apprentices through graduation exercises, to the state apprenticeship councils which have done excellent work, to the Federal Bureau of Apprenticeship for its excellent cooperation, and to the national staff.

Fred Fisher, Houston, committee vice chairman, led a discussion of apprentice training at one of the meetings of the Building Contractors' Division, during which representatives from various parts of the country described their programs.

The A.G.C. has representation on national committees as follows: Federal Committee on Apprentice Training, H. E. Foreman and J. D. Marshall; General Committee on Apprenticeship for the Construction Industry, R. W. Weitz and W. A. Snow; National Joint Bricklaying Apprenticeship Committee, Frank J. Rooney, Miami, Mr. Weitz, Mr. Marshall and Mr. Snow; and National Joint Cement Finishing Apprenticeship Committee, Jack Cooley, Detroit, Fred Fisher, Houston, and Mr. Snow.



Rudolph W. Weitz, Des Moines, chairman of Apprenticeship Committee, left, presents the Apprenticeship Award to W. W. MacLaughlin, Jr., secretary-manager of the Memphis Chapter. This is the first time that the award has been made.

Memphis Program Wins Award

The first presentation of the annual Apprenticeship Award was made at the 32nd annual convention to W. W. MacLaughlin, Jr., secretary-manager of the Memphis Chapter. The new award had been recommended by the Apprenticeship Committee for the manager of an A.G.C. chapter with an outstanding apprentice training program.

During the year the chapter had active training programs operating for carpenter and brickmason apprentices in Memphis and Jackson, Tennessee. There were 138 apprentices, of whom 49 graduated. Programs were also started for iron workers. They operate through local joint committees of contractors and the unions, with the records being kept in the A.G.C. office.

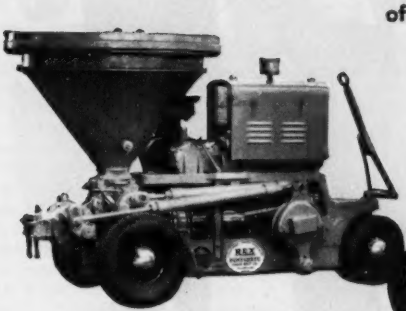
Mr. MacLaughlin during the year was named as General Chairman for the Third Southern States Apprenticeship Conference which will be held in Memphis June 14-16, 1951. The following states are participating: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Oklahoma, South Carolina, Tennessee and Texas.

You'll profit from these "cutting remarks"

. . . on how Rex Pumpcrete® and pipe line flexibility cut concrete placement costs on buildings of all types.

pumpcrete CUTS direct labor cost
Concrete is transported, elevated and placed in one operation. No rehandling . . . no buggying needed.

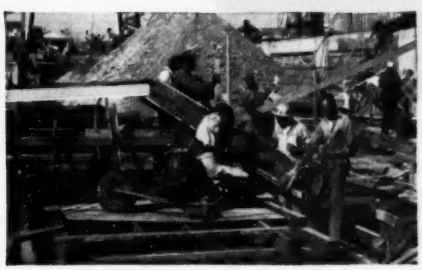
pumpcrete CUTS preparatory costs
Pumpcrete and pipe line flexibility eliminate need for many access structures such as road building and maintenance . . . towers and scaffolding, etc.



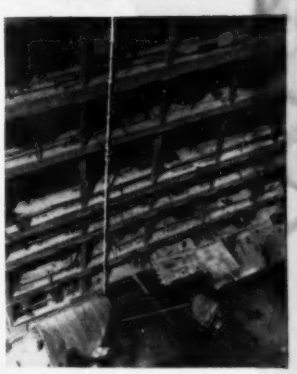
pumpcrete CUTS "dead time"
Delivers concrete in a steady flow. Often eliminates overtime caused by crews having to wait to avoid interfering with placement operations.

Just Look at these examples!

pumpcrete CUTS non-productive moving time
No need to move mixing equipment from place to place. Spot Pumpcrete in the one best location for concrete delivery.

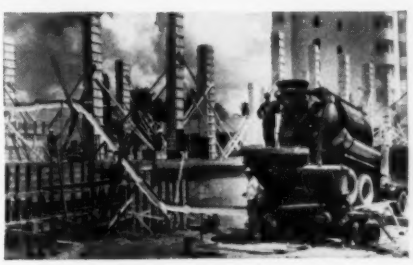


Here Pumpcrete is being used to place all concrete on a four-story steam generating plant. On this job there are many big pours in a small area. An important advantage of the Pumpcrete is its steady pumping which permits small crews to handle large volumes with little dead time. Better scheduling of all operations on the job is possible. Overall efficiency is greatly increased.



Nine stories high . . . 160 feet up! That's how high the Rex Pumpcrete lifted the concrete on this building job. Pumpcrete is ideal for pouring floors on buildings several stories high. As one floor is completed, the pipe line is just extended on the job. Expensive preparatory tower work, buggies and buggy runs and costly moving of such equipment are eliminated.

On this job the Pumpcrete, being charged by a Rex Hi-Discharge Moto-Mixer, pours the flooring of a large apartment building. An important advantage here was the fact the steel setting and forming crews were able to erect the tall column forms shown without interference from the concreting crews pouring the slab. Columns were poured when second floor was constructed.



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Heavy Contractors Debate Need for Contract Changes

- Continue Study of Escalator, Termination Clauses
- Urge Protection of Lump-Sum Job Conditions

» PROBLEMS brought about by the national mobilization program were discussed by the Heavy Construction and Railroad Contractors' Division during its two-day sessions in Boston.

George Heller, Johnson, Drake & Piper Co., Minneapolis, was elected chairman of the division for 1951 to succeed John MacLeod, Macco Corporation, Paramount, California. Edward P. Coblentz, McLean Contracting Company, Baltimore, was elected vice chairman.

Extensive discussion was given to the feasibility of escalator clauses in long-term contracts. There being no unanimity of opinion, the division voted to request the chairman, vice chairman and the Executive Committee to appraise the situation and to report when, in their judgment, it might be practical to advocate the use of escalator clauses.

Effects of recent wage stabilization regulations were discussed by Division Manager J. D. Marshall, who participated in a question and answer period on labor relations. This led to a discussion of the disruptive effects which cost-plus-a-fixed-fee contracts can have on lump-sum contracts already under way in an area. The division recommended a resolution subsequently adopted by the convention that government agencies give consideration to wage rates and working conditions on fixed-fee contracts which have the least possible effect on existing work in an area.

A number of members reported that the fees allowed by the government, particularly on larger fixed-fee contracts, were inadequate. The division recommended a resolution later adopted by the convention suggesting that government agencies develop equitable standards and give realistic consideration to costs of doing business and to making equitable adjustments when scope of the work is increased.

After preliminary study by a committee, the division expressed disapproval of the document compiled by the Department of Defense known as, "Uniform Rental Rates for Contractor-Owned Construction Plant under Cost-Plus-A-Fixed-Fee Contracts," and requested realistic consideration of rates set therein which were so low that they did not compensate contractors for their ownership expenses. The convention adopted such a resolution.

Discussion was given to the need for termination clauses in contracts, and the division recommended that continued study be given to the subject.

The practice of some government agencies of requiring a final cost statement on projects was discussed, and a motion was passed to place the division on record as advising the various construction awarding agencies that it is against the best interests of both contractors and the government for the agency to require a final cost statement on a specific job.

A motion also was passed recommending that government awarding agencies use competitive bidding wherever possible in connection with track-laying work.

J. A. Henderson, United Construction Co., Winona, Minnesota, reported on work of the task unit on Corps of Engineers specifications which last year met with the Chief of Engineers and members of his staff to work out a number of improvements in specifications for civil work. In view of the cordial relationship which exists between the task unit and the Corps, Mr. Henderson stated that the unit would be pleased to present to Corps officials such specifications matters of general application as individual members or chapters may care to submit.

George H. Atkinson, Guy F. Atkinson Company, South San Francisco, reported on work of the task unit on Bureau of Reclamation Specifications.

A report on activities of the Joint Cooperative Committee which the A.G.C. maintains with the American Society of Civil Engineers was made by Past President D. W. Winkelman, Syracuse, New York, who is co-chairman of the committee. He recommended that A.G.C. members provide employment for student engineers.

The results of a survey of chapters and branches serving municipal contractors was presented by J. M. Sprouse, assistant division manager. There was discussion of the feasibility of establishing a subdivision of the Heavy Construction and Railroad Contractors Division for the particular benefit of this type of contractor. Action of the division was to recommend continued study of the question.

The division recommended a resolution adopted by the convention which again voiced objection to the establishment of valley authorities.



Officers of the Heavy Construction and Railroad Contractors' Division for 1951 are George Heller, Johnson, Drake & Piper Co., Minneapolis, chairman, left, and Edward P. Coblentz, McLean Contracting Co., Baltimore, vice chairman, right. Assistant Managing Director J. D. Marshall is division manager.

1950 Reclamation Jobs Done Better, Faster

- Chief Engineer Praises Contractors, Cooperative Efforts

» DESPITE the fact that reclamation projects are being constructed on less favorable sites with generally poor foundations and with local, mediocre materials, the $300 million in construction in 1950 totaled one-third more than in the preceding year; was the most difficult ever done in a year's program; but was "accomplished better and faster than in preceding years," stated Grant Bloodgood, Chief Construction Engineer, Bureau of Reclamation, Denver, in his address to the Heavy Construction Division.

"A summary of the work accomplished during the last construction season shows that the work of our field construction forces was matched by progressive advances in contractors' skill and equipment. . . . You gentlemen, I am glad to say, have accepted this challenge with the characteristic spirit of most of our modern contractors, and have helped us by devising new methods and equipment and establishing new records for work accomplished. By so doing, you have served to keep the cost of our projects within reasonable economic limits."

Referring to the Construction Engineers' Conference in Denver earlier this year, Mr. Bloodgood stated that consideration was being given to suggestions set forth by George H. Atkinson, Guy F. Atkinson Company, South San Francisco, on behalf of an A.G.C. task committee.

Mr. Atkinson stated that drawings in the Bureau's specifications did not show sufficient dimensions for accurate quantity take-off for bidding purposes, resulting too often in losses or expensive changes when the drawings were made final. Also, the Bureau was too slow in advising contractors about the extent of allowable time extensions for changes and excusable delays.

Mr. Bloodgood assured his audience that steps are being taken to expedite the granting of time extensions and that it is the policy of the Bureau to show dimensions in drawings as completely as possible.

He asked contractors to furnish as promptly as possible, information on the cost of performing extra or changed work. "Your failing to do this has in some instances delayed the preparation and issuance of formal orders," he asserted.



Mr. Bloodgood

Speaking of some of the problems in the reclamation program, he said that "during the past year, one of our most serious problems has been that of enforcement of the labor provisions of the contracts. This has developed into a serious matter, and of course will result in stricter surveillance of this phase of all contracts."

Another problem has been the satisfactory completion of jobs being performed by contractors who had bid far too low.

Touching on contract adjustments, Mr. Bloodgood said "We have assured Mr. Atkinson and I want to assure you all, that we are constantly trying to cut down the time involved in making these adjustments; that we are constantly trying to get out beter drawings and eliminate the ambiguities in our specifications. The cooperation of Mr. Atkinson's committee has bee, very helpful in the past, and we hope for continued cooperation through the year to come."

Future Reclamation Work

Mr. Bloodgood stated that $225 million has been proposed for reclamation expenditures in the 1952 fiscal year, one-fourth less than was expended in 1950, but that it was too early to determine how much of this money would be approved by Congress. Although power development will be given primary consideration in the 1952 program, he said, important irrigation construction will continue.

This year's work will be hampered by the all too familiar material shortages and government restrictions, priority demands, manpower limitations, and rising costs, all of which cause uncertainties, delay completion and increase the costs of construction projects, he stated.

"Sometime during the year to come, we are going to have to deal with price and wage escalation, priorities on materials, substitution of materials, and many other headaches. So far we have very little information on how we will handle these problems, but they are not new to you, and we hope we can at least make a better approach to them than we did during the last war."

In conclusion, Mr. Bloodgood said that "striving for the proper approach to these problems represents a continued opportunity for applying the system of cooperation and joint discussion which we have already tried with success in your Reclamation contact committee. It may be that more study on the part of the Bureau, as well as the contractor, of the experiences during the last war would alleviate some of the headaches we are faced with under the present conditions.

"Let me assure you that the Bureau will continue to cooperate in the belief that eliminating these difficulties in construction and contract administration means that the reclamation program will cost less and go forward much faster."

Machinery Shipments

Shipments of excavating and earthmoving equipment, including off-highway trucks and trailers, during the fourth quarter of 1950 were valued at $146 million, virtually no change from the preceding quarter, according to the Bureau of the Census.

For major classes of products, fourth quarter shipments of power cranes and shovels showed an 18 per cent increase over the third quarter, while shipments of construction machinery for mounting on tractors, tracklaying tractors, and road construction and maintenance showed declines of 7 per cent, 4 per cent, and 3 per cent respectively.

Factory shipments for export of excavating and earthmoving equipment (other than power cranes and shovels) totaled $36 million in the fourth quarter, 16 per cent higher than shipments in the previous quarter.

In spite of inclement weather during February, two important projects in the Missouri River basin were brought to virtual completion, the Department of Interior reported. The Estes-Granby transmission circuit was completed and Bonny Dam on the South Fork of the Republican River in Nebraska was 97.3 per cent completed. Bonny Dam will provide irrigation for 6,000 acres of dry land in Kansas and Colorado.

Expediting Materials for Civil Public Works

• Engineer Official Outlines Procedure in Absence of Priorities

The procedures to be followed by contractors in obtaining critical materials needed on Army civil works construction projects was outlined to the Heavy Construction and Railroad Contractors' Division by Brigadier General C. H. Chorpening, Assistant Chief of Engineers for Civil Works.

Priorities assistance is not available to civil works projects, so General Chorpening outlined the procedures to be followed by the Corps of Engineers and contractors as follows:

Last December, a directive was issued to our district and division engineers, explaining that while priority ratings have not been extended to civil works projects, every appropriate effort should be exerted to provide assistance in accomplishing all work important to the emergency program. This assistance, it was explained, would be in the form of an expediting service and would require a procedure based upon two definite prerequisites —one accomplished by the Corps of Engineers, the other by the contractor.

Two Prerequisites

The first prerequisite requires that the Corps of Engineers issue a statement of necessity to the National Production Authority. This statement represents the defense importance of the project concerned, and is not specific as to any detailed materials required. It is incorporated in the contractor's request for assistance and forwarded to NPA.

Our division and district engineers have already placed with my office the required justification statements regarding the projects under their supervision.

The second prerequisite is initiated by the prime contractor or subcontractor on a job. It entails submitting to the Chief of Engineers detailed information on each individual order for materials or supplies. The information must be placed on Form T-ENG 5656—with which you, undoubtedly, are already familiar.

In submitting your specific requests, the following general rules should be applied:

Before making the request, every effort must be made to place an order for the required item—even if the supplier's date is unsatisfactory. If no order can be placed, then every effort made to place it, with names of suppliers contacted, must be furnished with reasons for rejection. You also should furnish us with the names of suppliers from whom you have obtained the same or similar materials in the past. In giving this information, state the amounts previously furnished.

You, as contractor, must follow up on each order placed. This is not only efficient business; it is necessary to furnishing pertinent statements required in Form 5656.

Every effort must be made to secure the needed materials from all suppliers. You must also make every effort to substitute satisfactory alternate materials or supplies. In your statement passed by my office to the NPA, you will be required to tell why such substitution is impossible.

Amount Very Important

It is extremely important that the amount of critical material involved in an order should be given. NPA directives are not issued on a manufactured product—on an item. The directives are issued on the supply of critical materials—copper, steel, aluminum, burlap, etc.—required in an item. For example, on one of our certified projects recently a large amount of copper wire was essential. After every effort had been made by the contractor to secure the wire from every source, he submitted a request to us, giving full details of the problem and asking that the NPA expedite the wire. NPA cooperated—but the purchase was of several thousand pounds of copper—not copper wire. This copper was placed in the hands of a manufacturer, who relayed to the contractor a corresponding amount of wire.

The problem of obtaining heavy equipment and spare parts is more difficult. No priorities are extended to civil works contractors regarding these items. It is the opinion of NPA that there is sufficient equipment and enough spare parts in this country to do the required job. Accordingly, all available new equipment and spare parts are currently being used to meet heavy overseas military requirements.

I often am asked about the prospects of getting defense priorities extended to civil works. I do not know the answer. I only know that we do not expect a control materials plan to be designed and placed in operation before July. I remind you, however, that the same people who put such a plan into effect during World War II have been assigned to do the job this time. Their past experience will, undoubtedly, prove valuable.

A.G.C. Responsibilities

I am confident that your association will accept the difficulties inherent to the national emergency gladly, knowing that we have a primary concern in providing for an adequate defense for America. I am equally confident that The Associated General Contractors of America will continue to cooperate splendidly with the Corps of Engineers in getting the job done —in time of emergency, as well as in peace.



Brigadier General C. H. Chorpening, Assistant Chief of Engineers for Civil Works, U. S. Army, who spoke at the Heavy Construction and Railroad Contractors' Division, lunches with 1950 division chairman John MacLeod, Macco Corporation, Paramount, California, left, and Past President Guy F. Atkinson, San Francisco.



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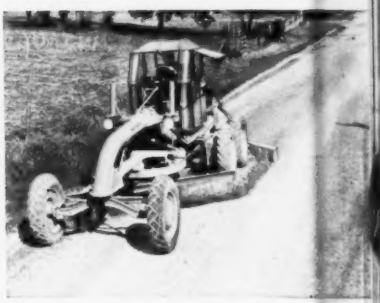
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Loads Snow







Highway Work Fundamental to Defense

» THE necessity for continuation of the highway construction program as fundamental to the national economy and the national defense was the question of greatest importance discussed by the Highway Contractors' Division at its two-day meeting.

Officers elected for 1951 were E. J. Maupin, Jr., Dodge Construction, Inc., Fallon, Nevada, as chairman to succeed N. K. Dickerson, Jr., Dickerson, Inc., Monroe, North Carolina; and F. W. Heldenfels, Jr., Heldenfels Bros., Corpus Christi, Texas, as vice chairman.

Part of the sessions were an open meeting of the Joint Cooperative Committee which the association maintains with the American Association of State Highway Officials.

Meetings with AASHO, NASAO —Page 95

Much of the discussion centered around problems of equipment, manpower and materials brought about by the mobilization program. The division recommended a resolution which was adopted by the convention that when a controlled materials plan is put into effect, the Bureau of Public Roads should have authority to allocate materials for highway construction, and that the allocations should be made through the state highway departments for all projects of highway, road and street construction.

Use of escalator clauses was discussed, but sentiment was against them except for freight rates. The division was heartily in favor of inserting termination clauses in highway construction contracts so that contracts could be terminated in a manner equitable to all parties in the event that mobilization developments made it necessary to halt projects.

A. C. Clark, Deputy Commissioner of the Bureau of Public Roads, spoke on current highway problems as viewed by his organization.

Developments in the civilian airport construction program were described by Crocker Snow, president of the National Association of State Aviation Officials; and an outline of progress made by the Joint Cooperative Committee of the two associations was given by Claude Friday, director, New York State Bureau of Aviation.

The division adopted a resolution recommending that in the construction or enlargement of airports for military purposes consideration be given to their subsequent civilian and commercial use.

Wade Edmunds, of the engineering division, reviewed the program of the Rural Electrification Administration and its markets for contractors.

Labor developments were discussed by Assistant Managing Director J. D. Marshall.



E. J. Maupin, Jr., Fallon, Nevada, elected chairman of the Highway Contractors' Division for 1951, is congratulated by retiring chairman N. K. Dickerson, Jr., Monroe, North Carolina, right. F. W. Heldenfels, Jr., Corpus Christi, Texas, center, was elected vice chairman. A. N. Carter is division manager.

A. C. Clark: Roads

The current functions of the Bureau of Public Roads as a claimant agency before the Defense Production Administration were described to the Highway Contractors' Division by A. C. Clark, Deputy Commissioner for Construction and Maintenance. He stated in part:



Mr. Clark

"The Bureau of Public Roads has been designated as claimant agency for all materials required for highway construction and maintenance work done by the BPR and by state and local authorities either with or without federal participation in the cost.

"As claimant agency we have no authority as yet to allocate materials nor to issue priority ratings to assist in obtaining them. Our sole function in this capacity at present is to assemble data relative to the quantities and types of materials required for highway work and to present such data to the DPA for consideration in determining over-all requirements and allocations of such materials for all military and civilian purposes.

"Estimates of construction materials required were submitted several weeks ago. The figures submitted to date pertain to nation-wide needs only. We recently requested each state to submit detailed estimates of anticipated requirements of scarce materials needed for highway work expected to be undertaken in the state during the 1951 calendar year, not only by the state department but by the counties and cities as well. These data are now being compiled.

"An important fact disclosed by our records of materials used in highway construction is that our requirements with respect to any one scarce material other than cement are in general a very small percentage of the total quantity produced. For example, highway work requires only about 1.2 per cent of the steel and about 1.4 per cent of the lumber produced. It would appear that these relatively small needs could be supplied without seriously affecting the quantities available for other purposes. The cement requirement is about 16.3 per cent and hence some difficulty may

develop in obtaining this material. Highway construction requires nearly half the bituminous materials produced but they are not yet included on the list of scarce materials.

"There has been no over-all allocation of any scarce materials for highway construction as yet. In a few instances it has been possible to get the National Production Authority to render some assistance in effecting earlier delivery of steel for particular projects. Each project has to be considered on its own merits by NPA.

"It is hoped that the essentiality of highway construction and maintenance with respect to national defense and public welfare can be so well established that the necessary materials for carrying on these important activities will be made available without too much difficulty. Just what the procedure will be has not yet been determined.

"A number of requests have been received for assistance in obtaining repair parts for contractors' equipment. Such repair parts are not included in the materials for which we are the designated claimant agency. The NPA now has in course of preparation a regulation intended to provide for use of defense order ratings in obtaining necessary parts, materials and supplies for the maintenance, repair and operation of production facilities. This regulation is expected to be sufficiently broad to cover equipment actually engaged in essential highway construction and maintenance. The requests received for assistance in obtaining parts for repair of contractors' equipment are therefore being held in abeyance pending issuance of the order."

Crocker Snow: Airports

There will be fewer civil airport contracts and no substantial increase in military airport contracts during the next few years, predicted Crocker Snow, president, National Association of State Aviation Officials, in his talk to the Highway Division.

Mr. Snow, in sketching future airport work, stated that few civil airports would be built; because of materials shortages, few new buildings would be constructed on existing civil airports; on the largest civil airports, new runways would be built and old ones extended; military airport work would be confined to constructing very long runways capable of carrying great loads.

He added that if "isolationist" factions in this country should gain predominance, there would be a marked increase in both military and civil airport construction.



Mr. Snow

At present, however, civil airport funds are being reduced. Civil airport appropriations have been cut in half and the CAA has been instructed to spend the remaining funds where they will do the military the most good. This means improvements for only the primary system will be made in the near future, leaving the secondary and tertiary systems without federal aid, he said.

Reactionaries who advocate "fighting the next war with the last war's weapons" are responsible for slighting the military advantages of improved airports, he said. "If sounder counsel prevails, we shall place our greatest reliance on the tools in the use of which we excel—strategic airpower, and a Navy capable of supplying and maintaining its more remote bases."

In conclusion, he stated that civil airport contracts will average less than they have in several past years, and military contracts will not increase much above present levels.

Wade Edmunds: REA

Though the rural electrification program has brought power to 90 per cent of the farms which were without electricity 15 years ago, there remains a large volume of work to be completed, Wade Edmunds, assistant chief, engineering division, Rural Electrification Administration, told A.G.C. contractors attending a Highway Division meeting.

Besides electrifying the remaining 10 per cent of U. S. farms now without power, there is the additional need of increasing existing power distribution. Originally, REA built lines to accommodate an average 75 kilowatt-hours per month. Today consumers on REA-financed lines are averaging more than 160 kilowatt-hours, he said.

At present, REA is lending money at the rate of $9.5 million per month. "This volume of business carries with it the serious obligation on your part to continue keeping construction costs as low as possible," he told his audience. As the remaining 10 per cent of the program involves farms in sparsely settled areas where the terrain is rugged and the unit cost of electrification is very high, contractors must strive to attain even greater efficiency if costs are to be kept low enough to make construction feasible and still obtain a reasonable profit.

Pointing up the power needs of rural electric systems, Mr. Edmunds stated that if the increasing demand is to be met, an additional generating capacity equal to the output of both Hoover Dam and Grand Coulee Dam must be created. "Already, consumers on REA-financed lines are demanding power equal to the output of the entire installations of TVA. REA studies show that by 1955 the present demand for power on rural systems will be at least doubled." He said that around $1 billion will be spent for generating systems in the next three or four years.



Mr. Edmunds

The telephone program calls for the expenditure of about $2 billion, of which an estimated 60 per cent will be financed by REA, he said. At the present time, REA has over 600 telephone loan applications under consideration.

Mr. Edmunds explained that the REA did not subsidize local systems, but operated strictly on a loan basis which, in spite of the liberal terms allowed, had already returned over $100 million in interest alone. To date, collections of principal and interest exceed the cost of the first five years of the program, he said.

Regarding labor and wage rates, Mr. Edmunds said in concluding his talk, that REA's failure to continue a prevailing wage rate policy had brought forth much criticism from many sources. Labor organizations have elicited objections in the form of resolutions. In view of this opposition "we decided to restore REA's prevailing wage policy, and I want you to know that we are going to do our best to see that it is fair and equitable to both labor and our borrowers."

The Importance of The Nation's Highways

By James A. Anderson

President, American Association of State Highway Officials

» IT IS an honor and a privilege to bring you greetings from the American Association of State Highway Officials and its 52 member departments. The highway official and the highway department he represents are happy that we have the highway contractors as full-time partners in our work of providing the nation with an over-all system of year-round highways.

Working relationships between the contractor and the highway official are being improved each year. Mutual confidence and respect for the roles each play are at an all-time high. This is due in large measure to the excellent conferences on problems of common interest which have been held all over the country under the guidance of Messrs. Foreman and Carter and their staffs.

You realize as well as I that the great strength of our nation is largely found in our transportation system. In developing our railroads, highways, waterways, airways and pipe lines we have developed tremendous capacities for making steel, rubber, fuels, aluminum and the materials needed in national defense. Not only have we developed the capacities for production, we have also developed precision tools and assembly-line methods as well as construction equipment and construction management and methods which are such a comfort to those high officials charged with the duties and responsibilities of national defense.

Let me illustrate my point by one example. In the early spring of 1941 Secretary Patterson came to Radford, Virginia, to dedicate a great ordnance plant. Twenty-four thousand workmen gathered for the ceremony. Secretary Patterson thanked these thousands of workmen for giving the nation what money could not buy—time. The plant was completed two months ahead of schedule. Why was this possible? Because the workmen came in light cars 50, 75 and 100 miles to work each day and returned home each night. No housing, feeding or recreational facilities were necessary. No provision had to be made for water, sewage, fire and police protection and the 101 facilities needed in a modern industrial city. The workmen lived at home. The motor vehicle and the passable year-round road made this possible. This plus the "know-how" of management and workers made this modern American miracle a daily occurrence.

Already we are faced with shortages of steel and other critical materials. The following is taken from Commissioner MacDonald's address before the A.A.S.H.O. in Miami on December 4, 1950:

"The Formulation of a Program"

"We do not know now what controls may necessarily be imposed. We do know that some materials, particularly steel, will be in short supply. Secretary Sawyer has designated the Bureau of Public Roads as the claimant agency to present to the Department of Commerce the requirements of materials for all highway construction and maintenance, including urban streets constructed with or without federal aid. We expect to discharge this responsibility with vigor and dispatch. Fortunately, the road program does not require the more critical materials, and there should be available sufficient steel, since so limited a percentage of our total production is required. The governing rule that as a matter of responsible public service must be applied by every highway official, is to direct the funds, the materials, equipment and contractors' organizations available into the program of construction projects selected on the basis of accurate knowledge of the service they must perform, of their condition, their cost of replacement, and the amounts of critical materials required. There must be a determination of whether each project can be held in service over a period of 10 years by maintenance, or whether reconstruction will be required within that period. If reconstruction is required the priorities must be fixed by providing the most important services first. This means an intensive continuing highway planning operation in each State, with the first duty an inventory of condition and traffic service required. This business of keeping our highway plant in operating condition is a great and serious responsibility. The responsibility rests most heavily upon the operating unit in each state—the state highway department. The essential quality of the highway plant in efficient operation carries with it a great opportunity for public service—a public service that will require faith and courage. The performance, no matter how effective, will be largely unsung. Undoubtedly there will be criticism, but there is also the possibility of an inner satisfaction that can come only from the knowledge of a duty well performed."

Budget Message

No doubt you have seen that part of the President's budget message relating to highways. Salient sentences are quoted:

"HIGHWAYS.—Partly as a result of reduced construction and maintenance during World War II, our highway system is not yet fully prepared to handle the current peak levels of motor traffic. While long-range improvement is needed in all classes of roads, we must concentrate in the present emergency upon overcoming those road deficiencies which are most serious from the standpoint of national defense or essential civilian traffic.

"The impact of defense traffic will be especially heavy upon the National System of Interstate Highways, a limited network of roads selected because of their special importance to both peacetime and defense needs. Substantial relocation and construction are required in order to provide the width, strength, and other characteristics needed to handle anticipated traffic. In reviewing state and local requests for federal aid, the Bureau of Public Roads will give primary emphasis to projects on this system, and to the principal urban roads which connect with it.

"Construction will be started in the fiscal year 1951 on a small number of access roads immediately required to serve defense installation. As additional factories and military camps are activated for the defense program, the need for new or improved access roads will correspondingly increase.

So far as possible, these and other emergency needs should be met by diversion of funds from roads of less urgency."

Both Commissioner MacDonald and General Fleming, the Under Secretary of Commerce for Transportation, are keenly aware of the necessity for maintaining and improving our highway system. Mr. MacDonald believes that if a road can not be maintained to give a reasonable service for a 10-year period, it should be rebuilt.

Mr. MacDonald has asked that the state highway departments collect, verify and correlate the needs for critical materials for highways in each state. The state highway departments are setting up ways and means of collecting, tabulating and forwarding the data for each state. Any political subdivision and any contractor is welcome to any information and any help that the state highway department can give. Please feel free and easy to call on your state highway department for any aid they may be able to render.

During World War II entirely too many high ranking persons assumed that our roads were expendable. Frequently excessive loads were permitted. Also materials, equipment and manpower needed to keep highways in condition to perform vital wartime service were denied. We have never recovered from those bad practices. Our major highways are less adequate for today's needs than they were in the early part of World War II.

A highway system can not be considered expendable for it would not be possible to replace or repair it quickly, even if the costs in money, manpower, materials and equipment could be spared from other defense needs. Policies adopted should assure reasonable protection of our highly important highway system.

It is the policy of the Department of Defense to conform to state and local laws, regulations and ordinances as to weight and size limitations of motor vehicles. Their policies are thus stated:

"a. Except in instances of overriding and urgent military necessity, no vehicular movement which exceeds any legal weight or size limitation will be undertaken over public highways by or for agencies of the Department of the Army, the Navy, or the Air Force unless prior permission is granted by the state or states concerned upon request of authorized representatives of the military departments. Permits for movement of commercial vehicles will be requested only after determination has been made that military necessity requires movement by the mode and manner selected.

"b. Only authorized representatives of the military departments may request permits from the state or states concerned when size and weight limitations are involved. Under no conditions shall a carrier be authorized to contact state authorities for such permits.

"c. In each instance of overriding and urgent military necessity in which an oversized or overweight commercial movement is made, report will be made to the director of the Military Traffic Service. A full statement of the circumstances and justification will be supplied."

No highway department could ask for better cooperation. We are grateful for these wise decisions.

Highways are such an intimate part of our life that we are too prone to take them for granted. We are but at the beginning of our mighty task.

Virginia is not a rich state but in many categories it can be regarded as an average state. In the past 10 years we have had an 89% increase in motor vehicle registration. For 4 years and 4 months; for 52 months, each month has been the peak month for highway traffic. More than a 60% increase in highway traffic in four years.

Reputation is not the end, it is only the beginning. Of him who has given much, much is forever after expected.

Roads are not needed only as a protection against an invader. They are needed for the preservation of our social and economic life.

The greatest boon of transportation is not technical. It concerns the lowering of costs of necessities and enjoyment so that happiness may be widespread. This has an importance that carries it into the realm of economics and statesmanship. It is the reply to the malcontent or communist who raises his voice against our institutions.

If this nation continues to be a dominant factor in the world it must continue to develop.

During the life of most of us this amazing highway transport development has come. It has changed our way of living and our civilization. We are losing ground at an accelerated



General Anderson (right) chats with N. K. Dickerson, chairman of the Highway Division. A top-honor graduate of Virginia Military Institute, General Anderson was head of the civil engineering department and in 1937 was named dean of faculty at V.M.I. He became Virginia's State Highway Commissioner in 1941.

pace. What can we do to change the picture?

President Greer in his annual address in Miami said:

"Our problem looks almost overwhelming to us today, but I would urge you to join with me in meeting the issues squarely as typical Americans, waging as good a fight as we know how, accepting the inevitable with grace and dignity, and devoting as much of our time as possible to finding ways to operate under the conditions in which we find ourselves, rather than wasting a great portion of our time in deploring our situation and bemoaning our fate.

"Why not move expeditiously and decisively in placing our money at work. We must do all we can to hold our road system together to give reasonably adequate traffic service to our people."

Increasing Productive Capacity

One of the most powerful weapons we have is our capacity to produce. Each year higher goals are set and each year those goals are reached and surpassed. From 1900 to 1950 our population doubled but our steel making capacity increased eight fold. Thus our standard of living has continued to rise.

It is our hope that we can continue to produce great quantities of durable goods for civilian use while we channel an increasing percentage of our production to the defense of our nation and our allies. If our hopes are realized the most foolhardy of our enemies will hesitate to engage us.

If our expanded productive might is realized, and we have reason to hope it will be, there need be no irksome controls over a long period. In building our productive capacity it may well be that the luxury of a short work week must be temporarily laid aside. This is a small offering for us to make for security and freedom.

Members of A.G.C. in their respective fields can and will make great contributions to the program. Modern manpower saving equipment, application of the management know-how to construction and maintenance work and inceases in productive capacity will go a long way toward offsetting necessary shortages and restrictions.

The following is taken from a talk before a highway conference in Virginia by President Darden of the University of Virginia. He was the Governor of Virginia during World War II.

"The only thing that can solve the problem of shortages in the United States is production, unbelievable production. We must lift the production of the United States far beyond anything ever seen in the past if we are to bring into balance the resources and the needs of mankind.

"What has been done in the field of transportation we can do in other fields. We can improve the productive capacity of this nation beyond anything we ever dreamed of.

"Among the millions of our young people there is unbelievable genius. Take that genius, open the doors to them and they will lead our country to heights heretofore beyond human conception.

"If we faithfully discharge our duty, if we succeed in traveling the road that has been charted for us we shall hand down to our children a land unbelievably rich and unbelievably happy with freedom and liberty unimpaired."

Almost 25 years ago Senator Byrd said at his inauguration as governor that gasoline was a necessity. Now the motor vehicle and the passable year round road are "musts" in our scheme of living. During the war when all pleasure driving was banned and the motor vehicle limited to essential use, traffic could only be reduced by one-third. Two-thirds of all former travel was absolutely necessary to our war effort and our economic existence.

There is no parallel in history to the growth of the highway industry in our country during the past quarter of a century. Our highways are the basic method of transportation and the very life blood of our economy.

AASHO Writes Washington

The following was written by the American Association of State Highway Officials to our chief defense mobilization heads in Washington:

"Most of the highway officials of the 48 States learned from bitter experience the problems confronting them in their effort to maintain the highway facilities during World War II and they speak from this broad experience. I would not for one moment leave you with the impression that these officials are under any illusion that in time of grave national emergency we can conduct the highway business 'as usual.' Well we know the impossibility of such an attitude. On the other hand, we believe that it was demonstrated beyond a question of doubt that our country would have had great difficulty surviving World War II without the highway system available to us at that time which, in effect, is just as much a part of our assembly line for the coordination of our material and natural resources in an all-out military effort as the assembly line in a tank plant. This applies to the products of our soil, our manpower and our industrial production. To illustrate this point, during World War II wing assemblies for B-29 bombers were produced in the Chicago area and delivered by highways to the final assembly line in Tulsa, Oklahoma. This is only one of the thousands of illustrations of how much our wartime economy depends upon our highway transportation system.

"For this reason I call to your attention and urgently solicit your consideration with regard to the importance of all-out production plans making provision—an adequate provision—for the availability of necessary materials, manpower and equipment to the highway administrators for the job of maintaining the highways."

The record of A.G.C., its officers and its members prove that here we have a great American asset. Its facilities and personnel are available and willing for any assignment.

We in the American Association of State Highway Officials look forward to working with you. Our goals are—

1. To give under all circumstances the best road service possible to all the people.
2. To free all roads for safe service.
3. To show what we can do in this national emergency.
4. To mold our employees into an even more cohesive, fighting unit —who know why they are working and that they are appreciated as front line workers.

Here is the greatest opportunity we will have in our time—let's be sure that we make the most of it.

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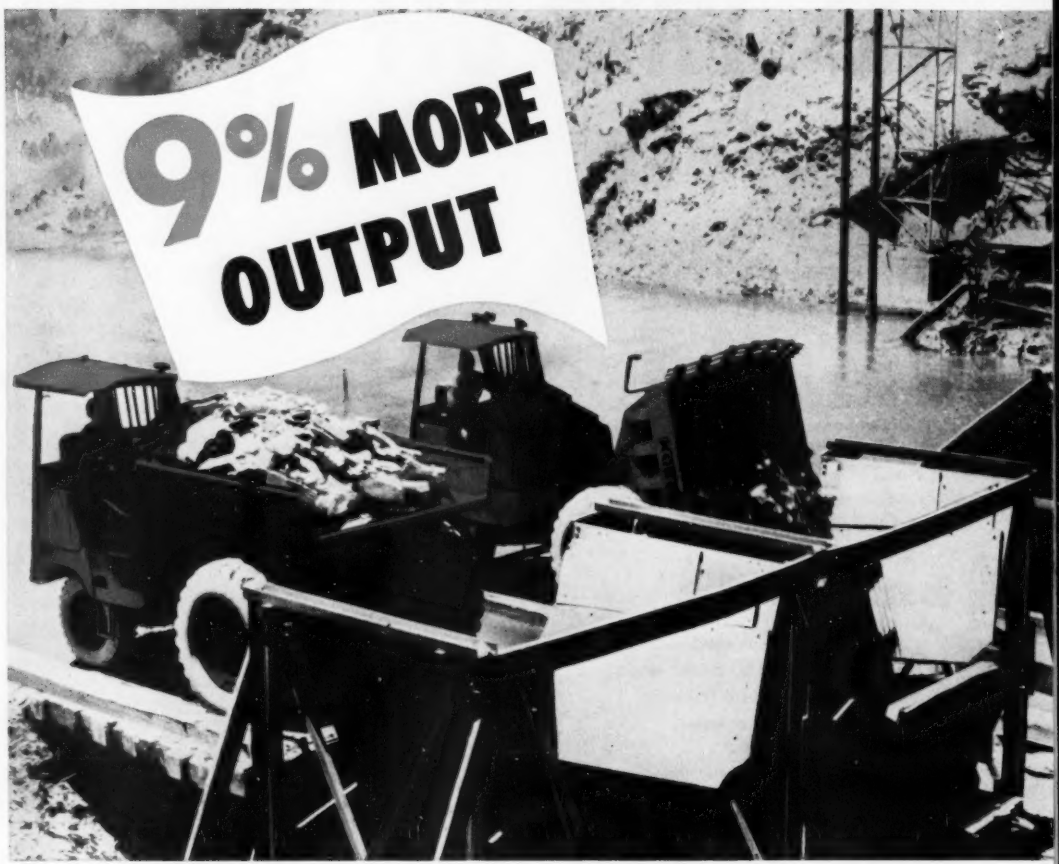
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This is typical of Koehring Dumptor's basic principle . . . to reduce all non-productive time to the absolute minimum . . . and to increase work-time for more yards per hour, more profit per yard for you. Dumptor has many other cost-cutting advantages worth checking . . . see your Koehring distributor.

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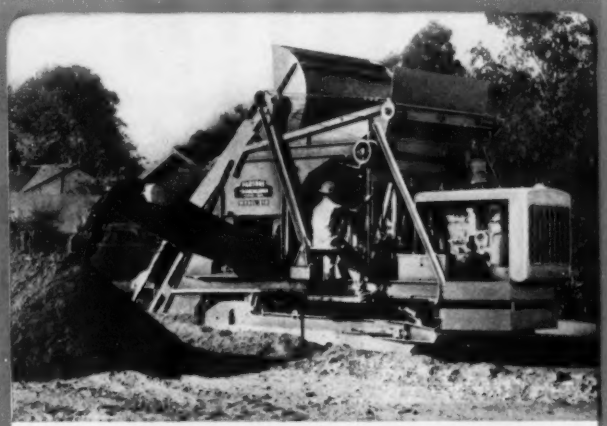
TON DUMPTOR STRENGTH PER TON OF PAYLOAD . . .
Layered steel-oak-steel bottom, rib-reinforced body, heavily-trussed main frame provide ample Dumptor strength to stand up to severe loading shocks



NO-TURN SHUTTLE HAUL
Koehring constant-mesh transmission gives Dumptor the same 3 fast speeds forward and reverse, eliminates slow turns at the loading unit, on narrow haul roads, and at dumping location.



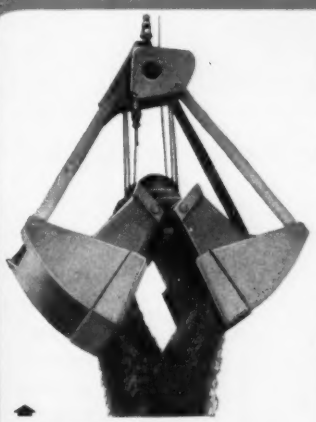
NO BODY HOIST means no complicated mechanical hoists to slow up haul cycles, no costly hoist replacement parts with Koehring Dumptors. Gravity dump is always instantaneous, trouble-free . . . no mechanical parts to wear out.



310 TRENCHLINER® digs 15½ ft. per min.

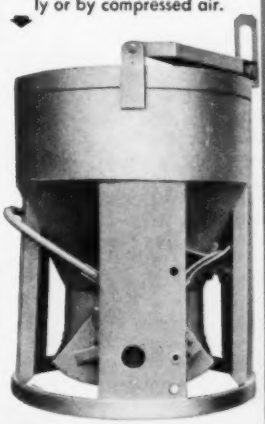
With 45 digging feeds, Parsons big-capacity Trenchliner digs 8 in. to 15½ ft. per minute, depending on depth, width of trench, soils. With single boom it digs 1½ to 4½ ft. wide at maximum 17 ft. depth. Dual booms dig up to 6 ft. wide at depths to 11 ft. Spoil conveyor shifts through machine by power in less than 1 minute, belt direction is instantly reversible, to dump right or left. Shiftable boom digs within 15 inches of either side. Also ask your Parsons distributor about smaller size Trenchliners.

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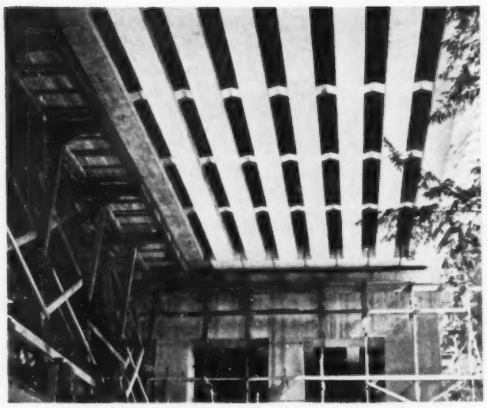
. . . 2 to 8-yd. sizes, with built-in vibrator, handle the stickiest concrete . . . have large controlled double-clam discharge gates, operated manually or by compressed air.



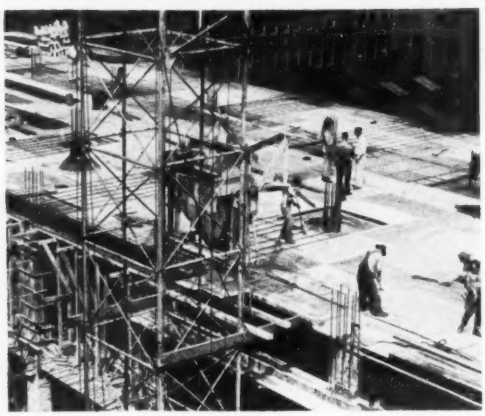
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Highway Group Urges Extensive Awards

• So Contractors Can Take Steps to Procure Materials Now

» THE URGENT need for continuation of the highway construction program was stressed by the Joint Cooperative Committee of the American Association of State Highway Officials and The Associated General Contractors of America at three recent meetings.

The first meeting was held February 28 in Boston as part of the A.G.C. annual convention. The second was held March 7 in Atlantic City at the annual meeting of the Association of Highway Officials of the North Atlantic States. The third was held March 10 in Chicago at the convention of the Mississippi Valley Conference of State Highway Departments.

The opinions of state highway officials and highway contractors were expressed by the resolution adopted in Boston which stated in part:

"Because of the great importance of highway transportation to the national economy, and to national defense, every effort must be made by all groups interested in highways, including highway officials, contractors, manufacturers of road-building equipment, and others to see that improvement of our highways continues at an adequate rate.

"A major effort will be required to get the job done. The aims should be a big volume for each of the next 10 years. In view of the fact that our highways are more obsolete than they were 10 years ago, and that we are constantly losing ground, improvement of the nation's extensive highway network must go forward.

"To secure adequate materials for road construction, the state highway departments and other awarding agencies should award, at once, as much work as possible. If this is done, the contractors' organizations can take steps to secure necessary materials. All awarding agencies should assist the contractors in this work by paying them promptly for the greater value of all materials when delivered, although the supplies are not actually incorporated into the finished highway or structure.

"To conserve critical materials, engineers should give study to layouts and designs reducing or eliminating the requirement for those materials in most critical supply.

"It is logical that the Bureau of Public Roads act as the claimant agency for construction supplies for highway work.

"In view of the demands for manpower and construction supplies if full mobilization develops, all highway departments should give serious study to use of a termination clause in their construction contracts. Major aim in such clauses should be: 1, make it legal for cancellation of the contract if war conditions dictate; 2, provide that the termination be fair and equitable to all parties.

"The committee believes that use of termination clauses will result in better bids, and be important in keeping prices down. It recommends that the few highway departments not using clauses that permit an adjustment in payment to the contractor as freight rates vary, give every attention to the possible use of such a provision."



C. M. Hathaway, of the Illinois Department of Public Works and Buildings, co-chairman of the Joint Cooperative Committee of the A.S.H.H.O. and A.G.C., presided at the committee meeting held in Boston in connection with the A.G.C. annual convention. Others, left to right, are A. C. Clark, Deputy Commissioner for Construction and Maintenance, Bureau of Public Roads; Frank D. Merrill, Commissioner, New Hampshire State Highway Department; and J. Burch McMorron, chief engineer, New York State Department of Public Works.

Call for Policy on Slating Airport Projects

» THE LACK of a definite policy on what types of projects may be undertaken is retarding the civilian airport construction program, the Joint Cooperative Committee of the National Association of State Aviation Officials and The Associated General Contractors of America reported.

The committee met February 27 in Boston in connection with the 32nd annual A.G.C. convention.

The Civil Aeronautics Administration was urged to issue a policy statement giving clarification of the types of projects which may be undertaken, and giving information to local sponsors who have arranged to finance projects which cannot now proceed.

It was reported that a number of local communities are being forced to pay interest on funds which had been secured for projects which approval cannot be secured at the present time.

The committee also made the recommendation to the Air Force that when new facilities are constructed, or existing facilities are taken over and enlarged for military use, consideration be given to their subsequent civilian and commercial use. It further recommended that where municipal or state airports are enlarged, arrangements be made whereby ownership and title to the improvements go to the municipality in fee simple when the facilities are no longer needed.

The committee expressed the view that contractors bidding on airport projects should be given firm commitments, if possible, on priority aid to secure critical materials. Committee cooperation was extended to the CAA in its future work as a claimant agency in the allocation of materials.

Progress was reported on committee projects, including methods to secure more prompt payments to contractors for completed work, establishment of accurate and fair wage rates, clarification of CAA policy regarding disputed final estimates, re-

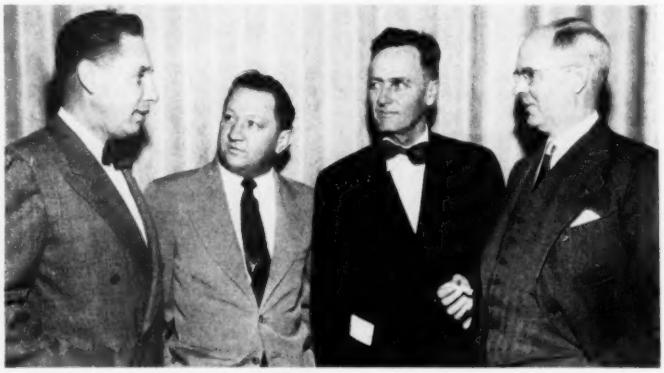
duction of red tape, and clarification of the responsibilities of CAA personnel on projects in giving instructions to contractors.

Other matters discussed included reasonable fees for consulting engineers on airport projects, long-range financing for airport development, and pending legislation.

Claude B. Friday, director, New York State Bureau of Aviation, served as chairman. Others representing N.A.S.A.O. included Norman C. Bird, Illinois State Department of Aeronautics; Francis A. Melaugh and Joseph P. Wallis, Massachusetts Aeronautics Commission; Albert R. Tavani and Robert M. Howard, Rhode Island Division of Aeronautics; and Crocker Snow, Massachusetts Aeronautics Committee and president of N.A.S.A.O.

The CAA was represented by George R. Borsari, W. C. Cullinan, Jr., E. Fletcher Ingals, Frank Carboine, and R. L. Reed.

A.G.C. representatives were George C. Koss, Koss Construction Co., Des Moines, Iowa; J. Warren Shoemaker, Warren Brothers Roads Company, Cambridge, Massachusetts; Chester W. Cunningham, Condon-Cunningham Co., Omaha; and C. Russell Ralph, Kaw Paving Co., Topeka. A. N. Carter, A.G.C. National Staff, is co-secretary.



Among those attending the Joint Cooperative Committee meeting of the N.A.S.A.O. and A.G.C. were, left to right, Claude B. Friday, director, New York State Bureau of Aviation, who acted as chairman; George R. Borsari, deputy chief, Airport Cooperations Division, CAA; Norman C. Bird, chief engineer, Illinois Department of Aeronautics; and J. Warren Shoemaker, Warren Brothers Roads Company, Cambridge, Massachusetts.

Ask Clarification of Construction Curbs

» CLARIFICATION of federal control over construction and simplification of the procedure of securing necessary materials in order to avoid delay in completing construction projects was recommended by the Joint Cooperative Committee of the American Society of Civil Engineers and The Associated General Contractors of America.

The committee met February 28 in Boston in connection with the A.G.C. annual convention. It recommended that government agencies to a greater extent seek the advice and assistance of the industry.



Those attending the Joint Cooperative Committee meeting, of A.S.C.E. and A.G.C., were, left to right, A. N. Carter, A.G.C. National Staff, co-secretary; Eugene L. Macdonald, Parsons, Brinckerhoff, Hall and Macdonald, New York; Albert Heartlein, A.S.C.E. vice president and Gordon McKay Professor at Harvard University; Admiral Kirby Smith, Raymond Concrete Pile Co., New York, A.S.C.E. co-chairman; Past President D. W. Winkelman, Syracuse, New York, A.G.C. co-chairman; Gail A. Hathaway, A.S.C.E. president, Washington, D. C.; George H. Atkinson, Guy F. Atkinson Co., South San Francisco; and Lester C. Rogers, Bates & Rogers Construction Corps., Chicago.

When a controlled materials plan is adopted in the mobilization program, the committee recommended that the government agencies which already have been named as claimant agencies also have the authority to allocate critical materials to construction projects.

Progress was reported in revising the standard contract form for private engineering construction which is being undertaken by committees of the two organizations.

The benefits of termination clauses were discussed, and their insertion in construction contracts was deemed logical by the committee.

The committee was in agreement with a recent report of the Engineers Joint Council by its Engineering Manpower Commission that a severe shortage of engineers is developing in the construction industry, and that early action is necessary to attract more engineers to the industry.

The need for higher salary scales for engineers in federal, state and local agencies was discussed, and it was recommended that the A.G.C. cooperate with the engineering societies in securing salaries for engineers in public service commensurate with their responsibilities.

Problems of the civil defense program were also discussed.

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4.	Standard Building Contract of the American Institute of Architects—Revised 5th Edition	.50		47.50
5.	Subcontract form—American Institute of Architects—Revised 5th Edition	.10		9.50
7.	Standard Government Contract and Instructions to Bidders	.10	.50	4.00
8.	A.G.C. Cost Plus a Fee Contract	.10	.50	2.50
9.	A.I.A. Cost Plus a Fee Agreement between Contractor and Owner	.10		
11.	Equipment Rental Agreement	.10	.50	3.00
12.	A.G.C. Proposal Form	.10	.50	3.00
	ESTIMATING AND ACCOUNTING			
16.	Building Estimate Summary	.10	.50	3.00
17.	Job Overhead Summary	.10	.50	3.00
20.	Contractors' Equipment Ownership Expense (Itemized tables of ownership expense elements with instructions for application. Revised 1949)	1.00	10.00	65.00
21.	Equipment Record—Bond paper	.10	.50	3.00
22.	Equipment Record—Cardboard	.10	.50	3.50
	INVESTIGATION OF BIDDERS			
24.	Standard Pre-Qualification Questionnaires and Financial Statements for Prospective Bidders—Complete in Cover Engineering Construction (For Qualifying Before Bidding)	.20	1.80	12.00
25.	Standard Pre-Qualification Questionnaires and Financial Statements for Prospective Bidders—Complete in Cover. Building Construction (For Qualifying Before Bidding)	.20	1.80	12.00
26.	Standard Questionnaires and Financial Statement for Bidders—Complete in Cover. Engineering Construction (For Qualifying After Bidding)	.20	$1.80	$12.00
27.	Standard Questionnaires and Financial Statement for Bidders—Complete in Cover. Building Construction (For Qualifying After Bidding)	.20	1.80	12.00
28.	Financial Statement and Questionnaire for Credit Transactions	.20	1.80	12.00
	MISCELLANEOUS			
29.	Insurance Check List	.10	1.00	5.00
30.	The Functions of a General Contractor	.10	.75	6.00
34.	A.G.C. Governing Provisions	.10	.50	3.00
35.	A.G.C. Code of Ethical Conduct	.10	.50	3.00
36.	Concrete Mixer Standards	Single copies — no charge; quantity prices on application.		
36a.	Contractors' Pump Standards			
37.	A.I.A. Standard Form of Arbitration Procedure			
38.	Suggested Guide to Bidding Procedure			

FOR A.G.C. MEMBERS ONLY

A.G.C. EMBLEM

List of Styles and Prices on request.

SIGNS AND SEALS

40.	A.G.C. Metal Seal (red and black) 10" dia.	.40
41.	A.G.C. Decalcomania Seal (red and black)	
	a. 10" dia.	.20
	b. 5" dia.	.10

Metal Seals and Decals: 20% discount for orders of more than 50; 40% discount for orders of 200 or more.

43. A.G.C. SOCIAL SECURITY FORMS

Form SS1: Application for Employment; Form SS2: Employees' History Record; Form SS3: Employees' Employment and Earnings; Form SS4: Payroll. List of prices and styles will be furnished to A.G.C. members on request.

USE THE CONVENIENT COUPON TO PLACE YOUR ORDER

Order No.	Amount	Cost
1.		
2.		
3.		
4.		
5.		
7.		
8.		
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11.		
12.		
16.		
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36.		
36a.		
37.		
38.		
40.		
41a.		
41b.		

43. Price List and Samples ☐

Price List and Styles of Emblem ☐

TOTAL COST _____

Make Checks payable to CONSTRUCTION FOUNDATION, A.G.C., Munsey Building, Washington 4, D. C.

Gentlemen: Enclosed find check for $_____ for which please send materials as ordered by number herewith.

*Name*_____ *Address*_____

*City*_____ *Zone*_____ *State*_____

April 1951

"New Emphasis" on Accident Prevention

• Alexander Reports Actions by Hard Working Committee

» ADOPTION by the A.G.C. 32nd annual convention of a new emphasis on accident prevention followed recommendations by the association's Accident Prevention Committee, headed by H. B. Alexander, Harrisburg, Pennsylvania.

The committee pointed out that safety efforts must be intensified, not only for the purely human benefits, but also for economy in construction practice, and to strengthen the position of general contractors against outside efforts to force controls by regulation or legislation.

Mr. Alexander reported that the number of contractors finishing out the 1950 A.G.C. accident prevention contest is the largest ever recorded, and noted that local contests also are increasing, and that more members are giving recognition to employees with the best safety records.

Highlighting the major safety activities of the A.G.C., the report stated that more than one-third of the members of the Executive Committee, Construction Section, National Safety Council, are connected with the A.G.C.; Harry J. Kirk, A.G.C. safety director, was elected general chairman, Construction Section; and President G. W. Maxon was a principal speaker at the N.S.C. Safety Congress held last year.

In 1950 a Joint Committee was formed with the associations of casualty insurers; a sub-committee of the Secretaries' and Managers' Council was appointed and will be continued as a permanent body; Assistant Managing Director J. D. Marshall and Mr. Kirk were active on committees of the President's Conference on Industrial Safety; an advisory subcommittee to the Accident Prevention Committee was authorized and appointed; the committee followed closely the development of all bills introduced in Congress having to do with the regulation of safety on construction projects; and the committee formulated a ten-point program for accident prevention activities.

Major points in this program include impressing upon the workman himself the need for safe practices on the job; encouraging member firms to study the economic benefits which result from practicing accident prevention; and strengthening the contracting industry's position for solid resistance to proposed outside controls by removing the cause for them.

Awards were presented in the division meetings to first place winners.



Above: Annually, awards are presented to the chapter in each of two groups, which has the largest percentage of members participating in the A.G.C. accident prevention contest. This year, two chapters in the small group tied for first place. Above, left to right: H. B. Alexander, chairman of the Accident Prevention Committee, presents awards to Arthur C. Wolff, 1950 president of the Milwaukee Chapter; Howard Tellepsen, 1950 president of the Houston Chapter, winner in the larger group; and D. W. Cowdin, of the Dallas Chapter.

Below: Loy W. Duddlesten, right, executive secretary of the Houston Chapter, receives from Mr. Alexander the annual award given to the chapter secretary or manager whose activities in the field of accident prevention are most outstanding.



[A complete report of the results of the national contest was published in the March issue of THE CONSTRUCTOR with the exception of the award made to Loy W. Duddlesten, executive secretary of the Houston Chapter.]

First Place Awards in A. G. C. Contest



« Highway Division

C. R. Ralph, left, Topeka, Kansas, a member of the Accident Prevention Committee, presents awards to representatives of winning companies in the Highway Division.

George C. Koss, center, receives the award for the Koss Construction Company, Des Moines, Iowa, which won first place in the class having above average exposure.

C. C. Diehl, right, Jefferson, Iowa, 1951 president of the A.G.C. of Iowa, receives the award for the J. D. Armstrong Company, Inc., Ames, Iowa, which won first place in the class having below average exposure. Average exposure for contestants in the Highway Division was 209,315 manhours.

There were no contestants in the Highway Division eligible for the award for the best ten-year record.

Building Division »

At right in Building Division: John H. Dahlman, Milwaukee, member of the Accident Prevention Committee, presents plaques to J. R. Sweitzer, St. Paul, Minnesota, a director of district six, who receives for the Madsen Construction Company, Minneapolis, first place winner in the class having above average exposure; Edmund Fretz, for the Fretz Construction Company, Houston, which won first place in the class having below average exposure; and H. B. Alexander, for H. B. Alexander & Sons, Inc., Harrisburg, Pennsylvania, best ten-year record.





« Heavy Division

Left to right: H. L. Conrad, Lansing, Michigan, presents awards to winners in the Heavy Division. J. E. Burke, Maxon Construction Company, Inc., Dayton, receives the award for his company for the best ten-year record; W. D. Amis, Oklahoma City, receives for the C. F. Lytle & Amis Construction Company, Cambridge, Nebraska, winner in the class having below average exposure; H. H. Sturdy receives for the Dravo Corporation, Pittsburgh, which won first place in the class having above average exposure. Average exposure for contestants in the Heavy Division was 875,565 manhours.

SAVED...time, money and materials!

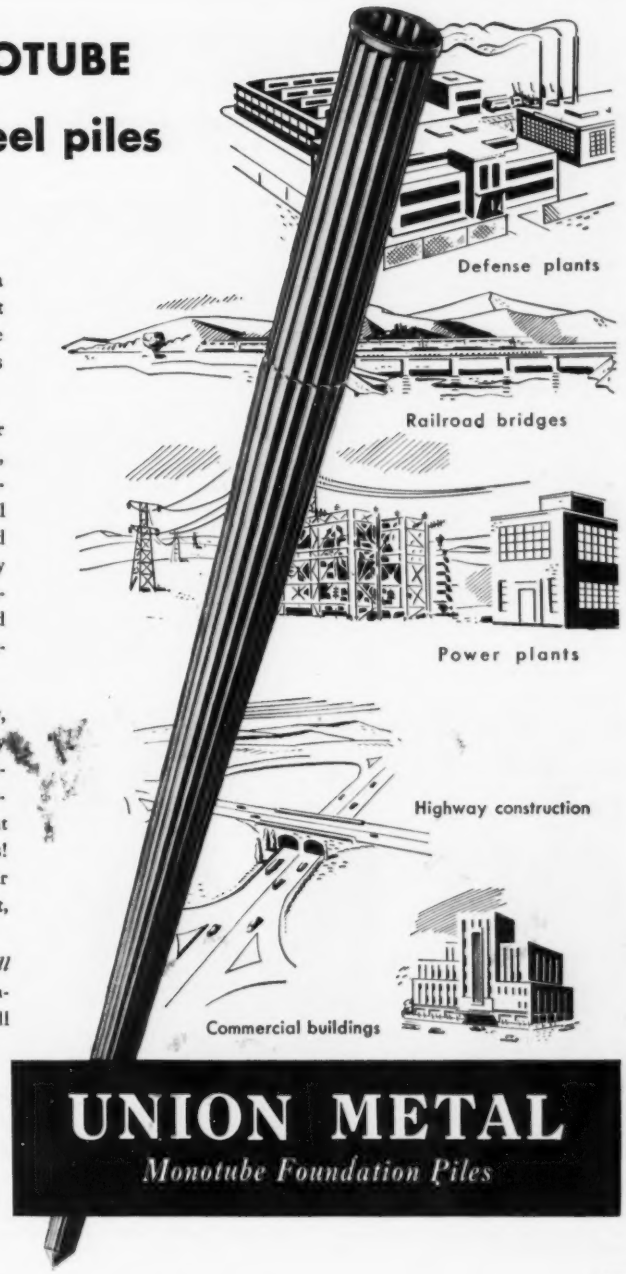
...with MONOTUBE taper-flute steel piles

THESE days, when conservation is a must, you'll want to take a *close* look at Monotube advantages and economies. We can't give you the whole story here, but as a starter, remember these facts . . .

CONSERVING MATERIALS! Due to their tapered design and cold-rolled properties, Monotubes *save steel* while providing unusually high bearing values and exceptional lateral stability. Result? Steel is conserved and required loads can often be carried by *fewer* Monotubes. Moreover, Monotube on-the-job extendibility, with easy cut-off and simplified weld-splicing, is another *big* factor in conserving materials.

SAVING TIME AND MONEY! Naturally, the above advantages save time and money as well as materials. But, *in addition,* Monotube taper-flute design results in *faster* driving. Lighter, standard driving equipment generally suffices even on the *tough* jobs! Then, too, because Monotubes are lighter in weight, they're easier, faster to transport, handle and locate.

Weigh these advantages. Then get *all* the facts and check them against your important construction projects ahead. You'll see many ways in which Monotube taper-flute steel piles offer material conservation as well as unusual economy all along the line. For complete data, write to The Union Metal Manufacturing Company, Canton 5, Ohio.



UNION METAL

Monotube Foundation Piles

Secretaries', Managers' Council Studies Many Current Problems

- Gifford Succeeds Arata as 1951 Chairman
- Public Relations, Safety Programs Stressed
- Chapter Civil Defense Functions Accented

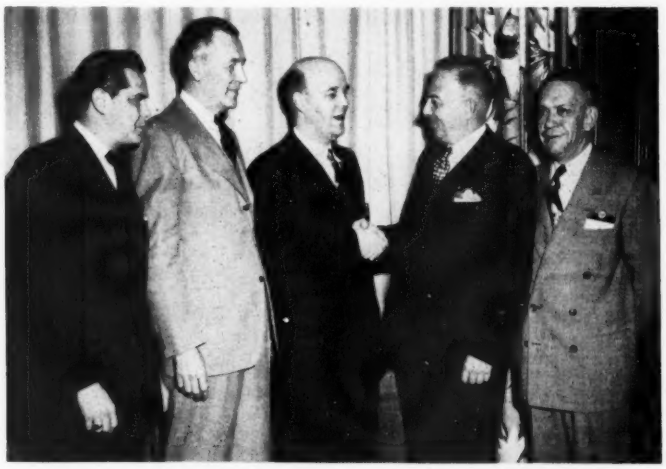
» PRINCIPAL topics discussed at the Chapter Secretaries' and Managers' Council meeting held in connection with the 32nd annual convention of The Associated General Contractors of America included contractors' participation in civil defense, changes in national dues, activities of the liaison committees on public relations and accident prevention, and chapter labor problems.

The meeting was commenced with talks by A.G.C. President Walter L. Couse, President-elect G. W. Maxon and Managing Director H. E. Foreman. Mr. Couse stressed the need of continuing the working relationship of the chapters and branches and the national staff, and thanked the secretaries and managers for their helpful cooperation during his term as president.

In pointing up the association's additional burdens created by rapid developments in the national emergency, Mr. Foreman said that "the troubles and problems of every branch of industry are our problems because we serve every branch of industry."

He stated that the increase in work of the national staff was forcibly indicated by the fact that in 1943 "our mailroom handled 378 separate projects. In 1950, it handled 1,576." Experience gained by the staff during World War II has enabled it to utilize many shortcuts and to direct and conserve its efforts, he said.

Assistant Managing Director James D. Marshall described highlights in the current complex labor situation, effects of recent National Labor Relations Board decisions, and construction controls. Following his talk, Mr. Marshall remained at the speakers rostrum for a lengthy question-and-answer period which afforded the nearly 100 chapter secretaries and managers in attendance the chance to hear discussion of a great number of varied labor problems from all sections of the United States.



Secretaries' and Managers' Council officers. Left to right, William C. Bowden, Pittsburgh, secretary; Robert Patten, Charlotte, N. C., vice chairman, building chapters; 1951 Chairman Allan E. Gifford, Boston; retiring Chairman Winfield H. Arata, San Francisco; and Earle W. Devalon, Denver, vice chairman, heavy-highway chapters.

Public Relations Opportunity

In reporting the activities of the Public Relations Liaison Committee, H. Mayne Stanton, secretary of the Chicago Builders Chapter, stressed the need of cooperation from chapter secretaries and managers in establishing a sound public relations program which must be carried out locally as well as nationally. "We now appreciate more than we ever did before that we have a responsibility to the public, we have an opportunity to tell the public in our own local communities just what doing business with A.G.C. members means, and to call attention to the responsibility, efficiency and integrity of the A.G.C. and really carry on a definite public relations activity."

The Public Relations Liaison Committee for 1951 is composed as follows: Co-chairmen, Charles H. Newell, Texas Highway Branch, and Orville W. Crowley, A.G.C. of Iowa; Eugene H. Brown, A.G.C. of West Virginia; W. D. Shaw, Southern California Chapter; and Judson Edwards, Florida West Coast Chapter.

Safety Programs Stressed

The report of the Accident Prevention Liaison Committee, given in panel form, advocated several functions aimed at improving chapter activities in this field.

Suggestions included emphasizing the money-saving rather than the contest features of accident prevention programs, and the increase in job efficiency; integration of chapter activities with the national staff program; establishment of a committee on accident prevention in each chapter; issuance of periodic chapter safety bulletins to members; including safety on the agenda for chapter meetings; accenting the public relations element of the accident prevention program, both for individual contractors and chapters as a whole; and stressing the fact that contractors must recognize the need of a good safety program on each job if further government regulation and union intervention in this area are to be prevented.

The panel was composed of Chairman George M. Schmeltzer, Pennsylvania Builders Chapter; Eugene H. Brown, A.G.C. of West Virginia; Hugh Connelly, A.G.C. of New Jersey; T. C. Tejan, Constructors Association of Western Pennsylvania; R. J.

Hendershott, A.G.C. of Minnesota; and C. Oliver Holmes, Indiana General Contractors Association.

Civil Defense Discussed

Civil defense problems were clarified in many instances by chapter managers who described plans for contractors' functions in event of a disaster in their areas.

Winfield H. Arata, Northern California Chapter, 1950 council chairman, gave the major steps in the development of disaster relief plans in the San Francisco area. These include: 1. Asking contractors to list equipment on hand which could be used in clearing debris, informing them that this equipment would be used by the contractors themselves on a rental basis. 2. Plans to set up committees composed of three men each, one of them representing contractors. These men will have car radios enabling them to call for contractors in distressed areas if phones are destroyed.

George W. Combs, Michigan Chapter, stated that Lansing, Michigan, was divided into four zones each of which was commanded by a general contractor who had authority to use his own men and equipment.

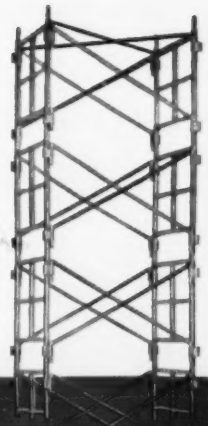
Mr. Arata and several other secretaries stated that the brochure on civil defense, written and distributed by the national A.G.C. staff, was being used as the basis for setting up defense groups in many parts of the country.

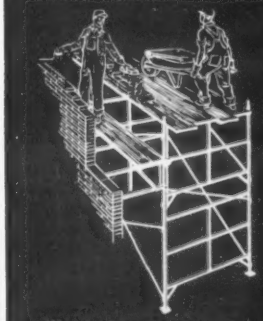
Following its general session, the council's divisions held meetings. Allan E. Gifford, Boston, presided at the building chapters' meeting where segregation of contracts, public relations activities, pre-determination of wage rates, National Production Authority control orders, and legislation were discussed.

At the highway-heavy chapters' meeting, with Earle Devalon, Denver, presiding, subjects discussed included federal highway funds and proposed state gas tax increases, national emergency termination orders, equipment recapture clauses, equipment rental rates and force account work. Arch N. Carter, manager, Highway Division, national staff, spoke on anticipated difficulties in procuring construction materials, equipment and repair parts.

In concluding its report, the council recommended establishing liaison committees for legislation and apprentice training.

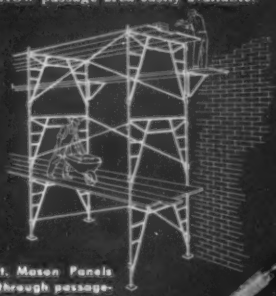
Let us help you figure how to "save" on any scaffolding job with UNIVERSAL Ezebilt (UL)





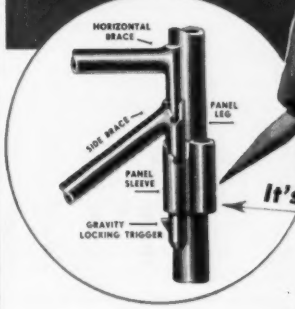
4-4½-5 ft. Mason Panels with intermediate plank-bearing areas.

Note how in these Ezebilt Mason applications, side brackets provide areas for exclusive use by mason—material storage always at convenient height—and wheelbarrow passage area easily available.



6½ ft. Mason Panels with through passageway at every lift.

No Bolts! No Nuts! No Loose Parts!



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President's Breakfast Popular at Convention



The chapter presidents' breakfast, held during the 32nd annual convention, proved so successful that chapter heads elected to have another early morning meeting before the convention ended. In the group above, photographed at random, are, left to right, C. B. Lauch, Idaho Branch; Lige Dickson, Tacoma Chapter; Thomas McCann, Fort Worth Chapter; and F. W. Heldenfels, South Texas Chapter. National President Walter L. Couse presided over the informal meeting.

Briefs on Chapters' Conventions, Elections

Detroit Chapter held its annual banquet at the Detroit Athletic Club. Speakers included national A.G.C. President Walter L. Couse, Past President Dan W. Kimball, and Managing Director H. E. Foreman.

Officers and directors for 1951 were elected by the chapter as follows:

President, Charles H. Richert, J. A. Utley Company; 1st vice president, A. S. James, O. W. Burke Company; 2nd vice president, John Cooley, John Cooley Company; treasurer, G. K. Chapman, Walbridge, Aldinger Company.

Directors are: Leet M. Denton, Denton Construction Company; Frank H. Taylor, F. H. Taylor Company; and Bert B. Jackson, Kuhne-Simmons Company.

Ralph A. MacMullan is secretary-manager and John E. Kinsella is assistant secretary.

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"...Mary had a little lamb, its fleece was white as snow..."
Sarah Hale





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PORTLAND CEMENT

Alaska Chapter at its recent annual meeting, elected the following officers:

President, D. L. Cheney, S. Birch & Sons; vice president, A. M. Strandberg, J. B. Warrack Company; and secretary-treasurer, J. J. Grove, Stock & Grove.

Directors are: D. W. Clayton, Lytle-Green Company; C. W. Hufeisen, Hufeisen Company; M. P. Munter, Munter Construction Company; and G. E. Lefler, Patti-McDonald Company.

Manager of the chapter is L. A. Moore.

Intermountain Branch, Salt Lake City, Utah, elected the following officers for 1951:

President, George R. Putnam, of the Utah Construction Company; vice president, Walter Christiansen; and secretary-treasurer, G. M. Paulson.

New directors are Douglas Fife, Charles Smith, Jack Tempest, and Eric Ryberg. Carry-over directors are Bert Strong, Cliff Tolboe, Albert Whitmeyer and Perce Young.

Allan E. Mecham is manager-counsel.

A.G.C. of Saint Louis recently elected new officers for 1951. They are: president, J. C. Bodine, Grantwood Contracting Company, Inc., Webster Groves; vice president, Heavy and Highway Division, H. C. Schenler, Ben Hur Construction Company, St. Louis; vice president, Building Division, Herbert N. Jones, Jones-Kissner Construction Company, St. Louis; treasurer, John P. Soult, Fruin-Colnon Contracting Company, St. Louis; and secretary, C. T. Wilson, C. T. Wilson Contracting Company, St. Louis.

Directors are: Joseph E. Latta, J. E. Latta Construction Company, St. Louis; Wallace L. Rhinehart, Westlake Construction Company, St. Louis; Eldon Farnum, Allied Construction Equipment Company; and A. O. Muehlenbrock, Mississippi Valley Structural Steel Company. The latter two are affiliate directors.

Henry S. Till, Jr., continues as manager of the chapter.

Kansas Chapter, Builders Division, installed new officers during its annual meeting in Topeka.

Martin Dondlinger, Dondlinger & Sons Construction Company, Wichita, succeeds Charles R. Bennett, Bennett



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If you haven't seen the improved RAMSET DUAL-ACTION TOOL in action, call your local RAMSET Specialist or write us for demonstration and proof. Takes only 15 minutes to learn for yourself how RAMSET will slash your costs and get your fastening work finished faster.

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CHAPTERS • BRANCHES

Construction Company, Topeka, as president.

Vice president is W. H. Douglas, Douglas Construction Company, Topeka; treasurer, Tom Constant, Constant Construction Company, Lawrence. Directors are Frank Blaser, Wichita; Val Borden, Salina; N. F. English, Hutchinson; E. J. Mitchell, Wellington. Kenneth R. Lewis is manager and executive secretary.

Delaware Chapter officers for 1951 are: president, Frederic G. Krapf, re-elected; first vice president, P. C. Van Sant, Van Sant Bros., Wilmington; second vice president, John Dangel, David Dangel's Sons, Wilmington; third vice president, Richard Raulston; and treasurer, D. M. Fontana. Francis E. B. McCann continues as chapter secretary.

Milwaukee Chapter board of directors has elected the following new officers for 1951: president, Robert C. Johnson, Siesel Construction Company; vice president, H. F. Mielenz, Kroening Engineering Corp.; secretary, Thomas H. Bentley, Jr., Thomas H. Bentley & Son, Inc.; and treasurer, George H. Field. These officers, along with Roland H. Becker, are directors of the chapter. George A. Benish continues as manager.

Associated Contractors of New Mexico re-elected Marshall J. Wylie, Wylie Bros., Albuquerque, as president. Other 1951 officers are T. R. Brown, vice president; and B. T. Bookout, secretary-treasurer.

Directors are G. I. Martin, N. J. Skousen, Mr. Wylie, Mr. Brown and Mr. Bookout. Chapter manager is Clyde O. Faulk.

A.G.C. of Missouri has elected officers for 1951. Ray R. Gast, Gast & Ray Contracting Company, Louisiana, is the new president. New vice president is F. E. Rolfe, Bushman Construction Company, Kansas City; treasurer, J. M. Joyce, Cameron, Joyce & Company, Keokuk, Iowa. E. C. L. Wagner, Jefferson City, is secretary and manager. Assistant manager is J. George Robinson.

Chapter directors are F. E. Dawkins, Geo. S. Fowler, H. W. Masters, J. R. Bushman, Dale Maxwell, O. W. Knutson, R. R. Riney, Morris DeWitt, E. W. Menefee, J. S. Maitland, H. J. Massman, Jr., G. H. Hamilton, J. M. Joyce, M. N. Windle, and F. E. Rolfe.

Central Louisiana Chapter re-elected R. J. Jones, R. J. Jones & Sons, Alexandria, as president. Other 1951 officers are Joseph Gossen, Lafayette, vice president; James Gremillion, Alexandria, vice president; Harry K. Gravier, Alexandria, secretary; and Barnet Brezner, Alexandria, treasurer. S. P. Eggers, Jr., is executive secretary.

Directors are Mr. Gossen, Sam Kaplan, W. J. Mouton, Horace B. Rickey, all of Lafayette; W. J. Quick, New Iberia; Mr. Brezner, Mr. Gravier, Mr. Gremillion, Mr. Jones and Robert B. Tudor, all of Alexandria; and James A. Eiland, Jr., Bunkie.

Arizona Chapter elected new officers at its annual meeting last month. L. G. Vinson, Vinson Construction Company, Phoenix, was elected president for 1951.

New vice president is R. M. Makemson, Wallace & Wallace, Phoenix; treasurer, R. H. Markham, Phoenix-Tempe Stone Company, Phoenix. Joseph P. Condrey was again appointed executive secretary.

Tacoma Chapter elected Lige Dickson as 1951 president. Roy T. Earley is new vice president, and P. F. Stevens is treasurer. Directors are L. B. MacDonald, J. W. Purvis, Roy Hartman, William E. Goettling, George Barr, George Mason, Earl Shipley, J. A. Woodworth, A. S. MacDonald, and J. A. Harrison.

C. W. Todd continues as manager of the chapter.

Michigan Chapter officers for 1951 are president, Curt E. Bottum, Ann Arbor; vice president, Ralph O. Dunn, Grand Rapids; treasurer, Henry A. Reniger, Lansing; directors, Mr. Bottum, Harry L. Conrad, Lansing; C. L. Davis, Kalamazoo; Ralph O. Dunn; Dan W. Kimball, Grand Rapids; Ralph A. MacMullan, Detroit; Henry A. Reniger; E. A. Schillinger, Benton Harbor; and Einar A. Strom, Muskegon.

Secretary-manager is George W. Combs, Lansing, succeeding Weldon Allen who resigned last month.

South Florida Chapter, at its 28th annual meeting, re-elected its entire slate of 1950 officers with the exception of two directors.

Frank J. Rooney, Frank J. Rooney, Inc., Miami, is president. Vice president is M. R. Harrison, Jr., M. R.

Harrison Construction Corp., Miami; secretary-treasurer, George Preston, Deizaard & Preston, Builders, Coral Gables. Continuing as executive manager is Paul H. Hinds.

Directors are James M. Albert, Albert Construction Company, Miami; Joe R. Edwards, Edwards Construction Company, Inc., Coral Gables; Edward M. Fleming, Edward M. Fleming Construction Company, Miami; Joseph J. Orr, John B. Orr, Inc., Miami; and newly elected Ben E. Mevers, B. E. Mevers, Inc., Coral Gables; and C. Frank Wheeler, C. F. Wheeler, Builder, Miami.

Northwest Florida Chapter will be headed by Charles L. Hendrick, recently elected president for 1951. W. O. Chavis is the new vice president and T. J. Parda is treasurer. Chapter secretary is C. H. Barrow.

New Orleans Chapter officers elected in 1950 to serve for two consecutive one-year terms are as follows:

President, Henry Boh, Boh Bros. Construction Company; vice president, George S. Farnsworth, R. P. Farnsworth & Company, Inc.; treasurer, J. A. Haase, Jr., Haase Construction Company; and secretary, John C. Bartley, Bartley & Binnings.

The chapter's managing director is Sidney H. Walker. Directors are Mr. Boh; Mr. Haase; Mr. Bartley; Lionel F. Favret; Gervais F. Favrot, Gervais F. Favrot Company; Gaston G. Gardebled, Chris Larsen Company; J. Gordon Lee; William F. Oakes, O'Connor Oakes Company; Claiborne Perrilliat, Perrilliat-Rickey Construction Company, Inc.; John Riess; George J. Glover, Geo. J. Glover Company; and A. N. Goldberg, A. N. Goldberg, Inc.

Southern Illinois Builders Association has elected the following officers for their second one-year terms.

President, Charles A. Rook, R. & R. Construction Company, Alton; vice president, Theo. H. Bauer, Belleville; directors, Joe W. Ganschinietz, East St. Louis; H. H. Hall, East St. Louis; A. C. Hoeffken, Belleville; John J. Keeley, East St. Louis; J. E. Latta, Wellston, Missouri; Charles A. Lybarger, Granite City; R. J. Moore, East St. Louis; Edgar M. Stephens, Cairo; and George W. Wheatley, Dupo.

C. M. Lomax is secretary-treasurer.



FOR ROAD BUILDERS—who demand longer-lasting and trouble-free equipment there is no better buy than Heltzel steel forms, Heltzel portable bulk cement plants and Heltzel portable aggregate plants. On every concrete highway and airport project you will find men who know the dollars and cents value of Heltzel equipment.

PORTABLE BATCHING PLANTS—Portable aggregate plants in capacities of 30, 45, 52, 72, 85 and 100 tons. Portable bulk cement plants in capacities of 100, 200, 300 and 400 barrels — and 9 sizes of portable recirculators to assure reserve storage to meet every requirement. Standard batchers will service 34E pavers — or dual batchers for the fastest batch truck operation obtainable.

HIGHWAY-AIRPORT FORMS—Standard forms for highway and airport construction are all-welded steel — featuring wide tread, upturned base flange and 5 rigid supports per form. Heltzel's exclusive dual duty forms are demanded by contractors who want one set of forms to pour two slab thicknesses from 6" to 24."

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Houston Chapter Officers



Houston Post

Houston Chapter elected Fred Fisher (center), Fisher Construction Company, as president for 1951 during its annual meeting held last month. He succeeds Howard T. Tellepsen, Tellepsen Construction Company.

Vice president is James B. Dent (right); treasurer, Demmie H. Cox (left), Texas-Gulf Construction Company, Inc. Loy Duddlesten was re-elected executive secretary for the fifteenth consecutive year.

New directors are Mr. Cox; Carl A. Schneider, Schneider Construction Company; and D. F. Van Cleve, Van Cleve Construction Company. Carry-over directors are Warren S. Bellows, W. S. Bellows Construction Company; and Messrs. Dent, Fisher, and Tellepsen.

Western Pa. Group Hears Senator McCarthy

» OVER 1100 tickets were sold for the annual dinner of the Constructors Association of Western Pennsylvania, held February 23 at the William Penn Hotel, Pittsburgh, in honor of Roy F. O'Mara, retiring president.

Principal dinner speaker was Senator Joseph R. McCarthy, R., Wisc., who spoke on current communist activities in America.

Other speakers were Colonel Conrad P. Hardy, U. S. Corps of Engineers; Levi Bird Duff, Allegheny County Director of Public Works; and James F. Devlin, director of the Pittsburgh Department of Public Works, who outlined work planned by various agencies for the coming year. Ray F. Smock, secretary, Department of Highways, gave a brief talk on the benefits of living in Pennsylvania.

New officers elected during the meeting are president, John E. O'Leary, Pittsburgh-Des Moines Steel Company; vice president of the Highway Division, Frank O. Patterson, Patterson Construction Company, Monongahela; vice president of the Heavy Division, Howard H. Sturdy, Contracting Division, Dravo Corp., Pittsburgh; re-elected as treasurer, Dan Dinardo, Dinardo, Inc., Pittsburgh; secretary, William R. McQuade, James H. McQuade & Sons Company, Pittsburgh; and assistant secretary, James A. Nardulli, Nardulli & Sons, Inc., Pittsburgh. Thurman C. Tejan is executive secretary.

Heavy Division members of the Board of Governors for 1951 are Mr. Dinardo, Carl J. Jacobsen, Carl Jacobsen, Inc., Sharpsburg; Robert H. Lee, George Vang, Inc., Pittsburgh; Allan D. McCombs, John F. Casey Company, Pittsburgh; Howard H. Sturdy, Dravo Corp., Pittsburgh; Ralph Cornish, Cornish Construction Company, Greensburg; and Russell C. Swank, Freeland Construction Company, Pittsburgh.

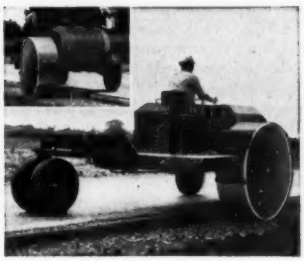


President O'Leary

Highway Division members are Anthony A. Benintend, Ben Construction Company, Pittsburgh; Max C. Harrison, Harrison Construction Company, Pittsburgh; Edward McCrady, Jr., McCrady Construction Company, Pittsburgh; William R. McQuade, James H. McQuade & Sons Company, Pittsburgh; James A. Nardulli, Nardulli & Sons, Inc., Pittsburgh; Charles H. Booth, Jr., Burrell Construction & Supply Company, New Kensington; and Frank O. Patterson, Patterson Construction Company, Monongahela.

Following the dinner, leather traveling bags were given to the two winners in the chapter's accident prevention contest for superintendents and foremen. Winners were D. P. Childress, Contracting Division, Dravo Corp., and William Hollinback, Beaver Asphalt Paving & Construction Company.

Trench Roller—*The Galion Iron Works & Mfg. Co., Galion, Ohio.* Roller features hydraulic mechanism for operating dual steering wheels which ride on pavement, hydraulically controlled leveling wheels and extra-large-diameter variable-weight compression roll. Adjustments are provided to level roller quickly to suit any trench requirements. Frame has sufficient clearance to enable roller to work in depths up to 25". Hydraulic control keeps machine on level plane from 6" above to 25" below road surface. Compacting effort varies from 310 lbs. with roll empty up to maximum of 370 lbs. (per lineal inch of roll width) with roll ballasted. Compression roll is equipped with front and rear tension scrapers and mats for moistening roll when compacting finish materials. Roller is powered by 4-cylinder gasoline engine. It has constant-mesh transmission, twin disc clutch, foot brake, spur gear final drive, adjustable operator's seat which gives clear view of forward and reverse operation.



Galion trench roller

Paving Breaker—*Cleco Division, Reed Roller Bit Co., 5125 Clinton Drive, Houston 20.* RC-50 50-lb. paving breaker is recommended for brick work, asphalt cutting and shop maintenance work. It has same type Reed-Cleco valve as that used on heavier paving breaker, RC-80. Valve gives full control on both power and return strokes. Breaker is constructed with wear-resistant alloys, has automatic lubrication.

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A rational method of construction for elevated express highways, heavy underpasses, underground garages, containers and ducts carrying liquids.

L. COFF, *Consulting Engineer*, 198 Broadway, New York 7, N. Y., Cortland 7-2753

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WARCO 100 H.P. Heavy Duty Motor Grader Model No. 4D-100

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MOTOR GRADERS

W. A. RIDDELL CORP. BUCYRUS, OHIO • builders of WARCO Motor Graders — HERCULES Road Rollers

Electric Cable Hoists—*Cleveland Chain & Mfg. Co., Broadway and Henry Sts., Cleveland 5.* "Bob-Cat" hoists are offered in ½, 1, 1½, 2, 3 and 5-ton capacities. Feature of hoist is total enclosure of motor within cable drum. Hoists are powered by high-torque Ohio motors. Gear reduction is by means of double internal (epicyclic) gear train that incorporates 2 Weston-type load brakes. Motor brake is of equalizing solenoid type connected to up-limit cut-off switch. Load-lifting and carrying parts are made of steel forgings and castings. Safety factor is in excess of 6 to 1. Load hook oscillates on ball bearings and swivels on roller bearings. It is suspended on 5/16" pre-formed plow-steel cable. Hook can be replaced without dismantling hoist. Designed for operation on 220, 380, 440 or 550-volt 3-phase, 60-cycle current, hoists are available with either pendant rope control or push-button control on pendant cable. Transformer in electrical supply line cuts voltage at control to 110 volts.



Only One Pair of Hands



NEEDED with ROOSHORS THE ONE-MAN SHORE

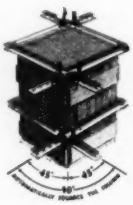
- Easy for one man to set and remove.
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- May be used over and over—floor to floor, or job to job.

Rooshors save in *time* and material . . . so naturally save money. They give instant adjustment in their range of three sizes: 8 ft. to 14 ft.; 7 ft. to 13 ft.; and 5 ft. to 9 ft.—higher stories are shored with Roos Extension Shores. Rooshors save every time you use them.

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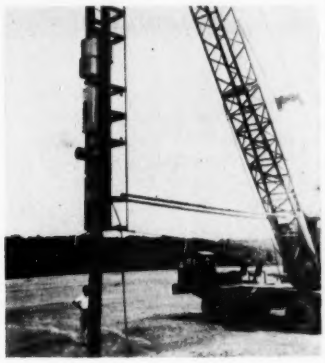
Compressor—*Gardner-Denver Co., Quincy, Ill.* Model WH-105 2-stage, portable air compressor is all-water-cooled 105 c.f.m. unit. Air is compressed to 28 lbs. in first stage, cooled back almost to atmospheric temperature in radiator-type inter-cooler and boosted to final discharge pressure in second stage. Improved unloader pilot operates suction unloading valves within fixed range and automatically throttles engine to idling speed and unloads compressor. Engine accelerates to full operating speed just prior to compressor going on load. Hercules QXD-5 6-cylinder gasoline engine has 3 7/16" bore and 4⅛" stroke. Piston displacement is 230 cu. ins. Engine features crankcase and cylinder block cast integral, high-compression, high-turbulence cylinder head, 7-bearing crankshaft, "Tocco" hardened main and connecting rod journals, positive seals at front and rear of crankshaft. Pistons are lightweight, aluminum alloy type. Each piston has 4 rings, one oil and three compression, above piston pin.

Scoop—*Mixermobile Manufacturers, 8027 N. E. Killingsworth St., Portland 20, Oreg.* Large materials-handling machine, "Super-Scoopmobile," has bucket with level capacity of 5 cu. yds. Machine weighs over 18 tons. Heavy-duty 4-speed forward and reverse transmission is powered by 4 to 1 planetary drive axle from 250 h.p. diesel engine. Track tilt has hydraulic control and carriage can be operated with track in any position.



"Super-Scoopmobile"

Pile Hammer—*Syntron Co., 736 Lexington Ave., Homer City, Pa.* Self-contained diesel pile hammer is 15'6" long, has 20" diameter and weighs 11,000 lbs. It delivers driving energy at rate of 16,000 f.p. per stroke and is capable of 84 strokes per minute. Weight of ram or striking part is 5,400 lbs., maximum power stroke is 4'. Hammer fits in standard 20" leads, can be handled by gasoline- or diesel-operated crane and requires 2 lines—one for lifting hammer, other for lifting pile and for starting hammer by lifting its piston. Force of each blow is remotely controlled by means of hydraulic system which operates similarly to automotive hydraulic brakes.



Syntron's diesel pile hammer

Saws—*Cummins Portable Tools, 4740 N. Ravenswood Ave., Chicago 40.* Two power saws for heavy construction jobs are Model 905 with 8" blade and weighing 19 lbs. and Model 1000 with 9⅝" blade and weighing 22 lbs. Model 905 makes square cut of 2⅝" and cuts through 2 3/16" lumber at 45°. It has Universal AC-DC motor, 115 volts, 220 volts special; no-load speed of 3,600 r.p.m.; ball bearings throughout; hardened steel alloy worm, bronze worm wheel; double pole switch; momentary contact, with lock button; blower to keep cut clean; telescopic type safety guard with quick return; 25' 3-conductor cord with 2-prong plug and pigtail connector for grounding. Model 1000 cuts 1" to 3 7/16" at 90°, and ¾" to 2 13/16" at 45°. No-load speed is 3,400 r.p.m. Other specifications are same as those of Model 905.



MICHIGAN TRUCK EXCAVATOR... rated "TOPS"

by City of Birmingham, Michigan

"Thirteen years is a lot for a machine, and we beat it badly. It was a good old machine." That's what Marx Fall, Superintendent Department of Public Works, said about the MICHIGAN ⅜ yd. truck hoe owned by the city for thirteen years.



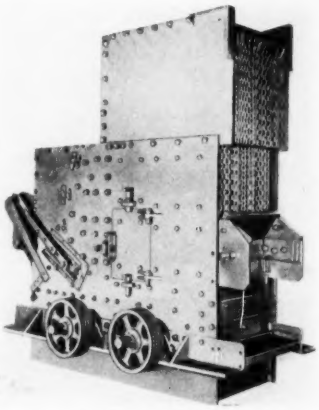
The City of Birmingham now operates a new MICHIGAN S-4 ½ yd. truck hoe which works 48 hours a week trenching for water and sewer connections, much of the time in blue clay. Operator Tom Griffin said: "It operates easily and against other ½ yd. machines our MICHIGAN ditches faster. It's easier to drive, too."

Mr. Fall added: "We need the rubber tired mobility and the truck speed of the MICHIGAN. Its short wheel base is particularly good for our work."

MICHIGAN POWER SHOVEL COMPANY

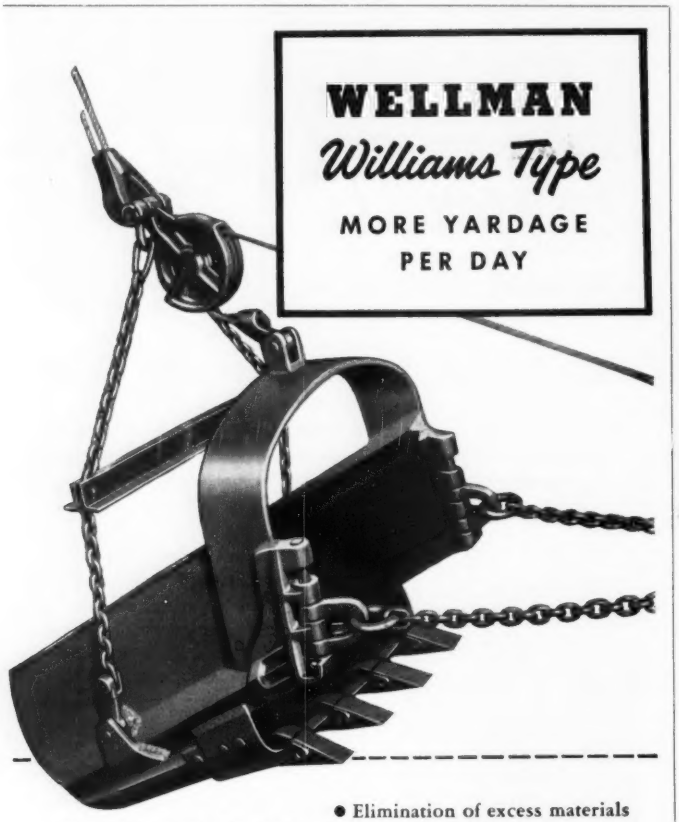
485 Second Street, Benton Harbor, Michigan, U. S. A.

Impact Breaker—*Pettibone Mulliken Corp., 4700 W. Division St., Chicago 51.* "PMCO Impact Master" is heavy-duty impact breaker featuring "controlled impact action" which controls breaking operation and directs flow of material through machine. Other features are high ratio of reduction, low h.p. per ton of finished aggregate, easy access to all parts. Machine consists of outer plate steel housing forming breaking chamber over 2 rotor hammer members which are mounted in base. Rotors have 3 rigidly supported hammers each, and rotate on heat-treated alloy steel shafts mounted on anti-friction bearings. Hammers rotate in same direction at speeds of 550 to 1,000 r.p.m. Size of finished material is governed by speed of rotors and by adjustments of stripper bar and lower screen grate, both of which are protected from damage by tramp iron by automatic return spring-loaded safety devices. Model 3240 "Impact Master" has ratio of reduction between 32–1 and 40–1. It will accept quarry run rock up to 50" long that will pass freely through 32" x 40" opening and will reduce it to specification material in one operation. Machine has capacity of 250 tons per hour of minus 2½" in average limestone. Other models are available with capacities up to 500 tons per hour.



"PMCO Impact Master"

Tractor—*John M. H. Shline Co., 342 Madison Ave., New York 17.* Shline Co. has been appointed exclusive representative and distributor for U. S. of British diesel crawler tractor manufactured by John Fowler & Co. of Leeds. Line ranges from 95 h.p. down to 20 h.p. "Challenger Mark III" model has 6-cylinder, 4-stroke diesel engine developing 95 b.h.p. at 1,550 r.p.m. providing 82.4 h.p. at drawbar. Main engine clutch is spring-loaded plate type. Tractor has 6 speeds forward, from 1.50 m.p.h. to 5.67 m.p.h., and 4 reverse, from 2.08 to 5.13 m.p.h. It weighs 23,600 lbs. Gage (center to center of tracks) is 72", width of track plates is 20", length of ground contact of each track is 94", ground pressure is 6.3 lbs. per sq. in. Tractor is 13'6¼" long, 7'8" wide, 8'10½" high (top of exhaust pipe). Ground clearance is 1'3".



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MORE YARDAGE PER DAY

• Elimination of excess materials and careful weight distribution permit rapid, rhythmic operation of Wellman Dragline Buckets. Operators can cover a wider digging radius with this streamlined bucket.

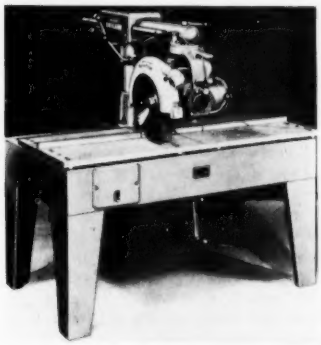
Built of special alloy steel, using strong welded design, Wellman buckets provide strength and stamina for long-term economy. Perforated designs also available. You'll do better with Wellman.

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THE WELLMAN ENGINEERING COMPANY
7000 Central Avenue • Cleveland 4, Ohio

DRAGLINE, CLAMSHELL, CUSTOM-BUILT BUCKETS • STONE AND WOOD GRABS

Saw—*Skilsaw, Inc., 5033 Elston Ave., Chicago 30.* Model 450 radial saw is available with manual or magnetic controls. Easy-to-reach adjustment handles and special stops which automatically set saw at more common cutting angles are features. It is made in variety of voltage, h.p. and motor cycle specifications with 14″ or 16″ blades. It requires floor space of 4½′ x 6′ and weighs 475 lbs. Work table is 11¼″ deep and may be increased to 13¼″. Bearings can be quickly re-aligned to within 1/1000 of an inch.



Skilsaw's Model 450 radial saw

Masonry Waterproofing—*Prima Products, Inc., 10 E. 40th St., New York 16.* New transparent waterproofing material called "Siliphane," contains silicone resin, made by The Linde Air Products Co. According to Sy Schulman, Prima Products' chief engineer, "Siliphane" does not coat surface, but penetrates masonry, coating every part with water-repellent film. It can be brushed or sprayed on exterior, above-grade masonry walls of all types.

Masonry Waterproofing—*State Chemical Corp., 1265 Broadway, New York 1.* "Monsoon," transparent water repellent, also contains silicone resin. Application can be made either indoors or outdoors over wide temperature range with no change in appearance or porosity of masonry, according to manufacturer. Added advantages claimed for product are self-cleansing action and effectiveness against efflorescence. Product is applied to dry masonry structures by spraying or brushing.

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Come to us with your pumping problems. We can furnish you with any size of self-priming centrifugal pump ranging in capacity from ¾ inch, 1000 GPH to the big 10 inch, pumping 240,000 GPH.

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New Contractors' Pump Bulletin 8-CP-11 furnished on request.

THE GORMAN-RUPP COMPANY
MANSFIELD, OHIO

Goggles—*American Optical Co., Southbridge, Mass.* Improvements are announced in 2 series of safety goggles—7000 and 3081 series. Metal 7000 series now have brown tubing, temple and endpiece screws of "Evertite" construction with countersunk, non-snagging heads. Eyewires are flat instead of round. Eyewire bar is engraved and flange that holds side shields, which are optional, has been reduced and given rolled edges. Lenses can be replaced without removing side shields. Same new design features are incorporated in 3081 series. Bridge and reinforcing bar are covered with soft leather guard. Side shields of soft leather are permanently attached to rolled-edge, binder-type, one-piece eyewire. ¶ New goggle designed to provide eye protection from flying particles is F4100 "Ful-Vue" metal goggle. Light-weight eyewire is flat, has engraved beading. Endpieces are streamlined and incorporate friction joint with wide bearing surfaces. Screw heads are countersunk. Goggle features light, adjustable temples, persipiration-proof insulating tubing over ear portions, adjustable guard arms supporting nose pads. Optional side shields are offered in non-corrosive perforated wire mesh or clear acetate, either perforated or non-perforated. It is supplied in 3 standard eye sizes and 5 standard bridge sizes.



Generator-Power Saw Combination—*Consolidated Machinery & Supply Co., 2031 Santa Fe Ave., Los Angeles 21.* Portable trailer-mounted radial power saw-generator combination provides power for 6 single-phase 120-volt power outlets for portable electric tools, as well as power for saw. Saw is 3 h.p., 3-phase, 240-volt Comet Clipper that cuts stock 16" wide up to 4⅜" thick. Four-cylinder gasoline engine drives generator which delivers 5 kw of power. Saw, generator and motor are all mounted on all-steel, 2-wheel trailer.

Drill Steel Reclaimer — *Rock Bit Sales & Service Co., 2514 E. Cumberland St., Philadelphia 25.* "Hole-Saver" is used to reclaim lost bits and drill steel broken off in hole. Attached to threaded steel in place of bit, its left-hand tapered threads cut in metal of broken rod and remove it quickly. Tool is threaded for Timken H or D, Rock Bit R-1 or R-2 steel to fit following size steels: ⅞" Hex., ⅞" Q.O, 1" Hex, 1" Q.O, 1⅛" Rd, 1¼" Rd. and 1⅛" Rd.

Engine—*Nordberg Manufacturing Co., Milwaukee 7.* Type 4FS2 is 2-cylinder diesel engine rated at from 20 to 30 h.p. with operating speed range of 1,200 to 1,800 r.p.m. It has 4½" bore and 5¼" stroke and is heavy-duty, vertical, 4-cycle, mechanical-injection engine. It is built as complete, self-contained, ready-to-operate unit and is offered as electrical generating set, pumping unit and with clutch or stub shaft power take-off for direct connection or belt drive. It is designed to generate light or power for shovels, cranes and magnets, sand and gravel plants, etc.

Loader—*Tractomotive Corp., Deerfield, Ill.* TL-10 "Tracto-Loader" features hydraulic torque converter drive and new-design clutch-type transmission. Machine is mounted on rubber tires, has ¾-cu. yd., hydraulically controlled bucket and weighs 10,650 lbs. Power is furnished by Allis-Chalmers 40.5 brake h.p. gasoline engine. Bucket is over drive wheels.



TL-10 "Tracto-Loader"

Steam Cleaner—*Homestead Valve Manufacturing Co., P.O. Box 843, Coraopolis, Pa.* Combination steam cleaner and automotive cooling system flusher is known as Model JO "Hypressure Jenny." Unit is equipped with oil-fired, electric-motor-driven steam cleaner which operates at 80 to 120 lbs. pressure and has 90 gals. per hour water capacity. Cleaner reverse-flushes complete cooling system, including radiator, engine block and water-type heaters, in one operation.

Elevating Endgate—*St. Paul Hydraulic Hoist Co., 2207 University Ave., S. E., Minneapolis 14.* "Frate-Gate" fits all van, platform or stake body trucks and will raise loads of 2,000 lbs. from ground to body level. It raises flush with floor of truck body and is mechanically locked. It operates through direct action of hydraulic cylinder, compounded through lifting arms and held level by coupled links. Power take-off, pump, controls and mounting brackets are included with gate. It is offered in following platform sizes: 84" x 28", 84" x 34", 90" x 28", 90" x 34". All platforms include 8" ramp.

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Literature describing remarkable features of the new ROGERS Power-Lift Detachable Gooseneck Trailer will be sent upon your request; but—more than that—any Rogers Dealer will demonstrate its features, right on your own desk with an *operating scale model.*

Contact him—see how easily it detaches—how the deck can be raised or lowered to avoid unloading and detouring under certain conditions—how disabled, non-powered equipment can be loaded easily—how the design provides giant tires for extra heavy and profitable payloads.

To buy a trailer without seeing this Rogers unit would be like going to the circus without seeing the elephant. Don't do it.

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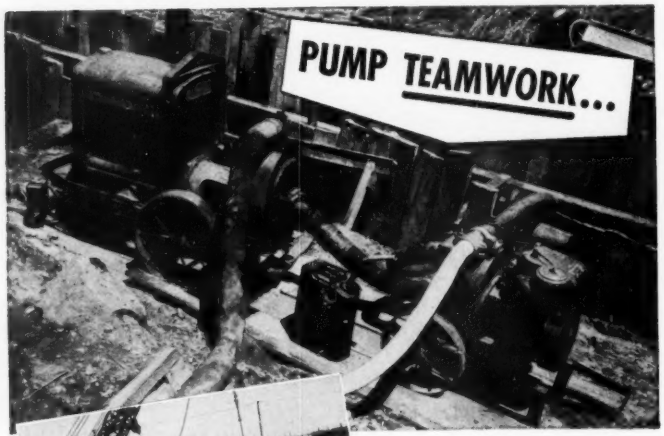
Trench Hoe—*Harnischfeger Corp., 4418 W. National Ave., Milwaukee 14.* Model 150 ½-yd. capacity trench hoe is now equipped with new "Gooseneck Boom." It follows design recently introduced on P&H Model 255-A. Design of new boom makes possible higher speeds, greater digging depths, manufacturer states. Increased speed is obtained through use of 2-part hoist line. More power is made available for tough digging by low gear transmission. Hoe can start trench with vertical cut and can trim vertical walls. Special hoe stick linkage provides chopping action.

Earth Auger—*Petersen Engineering Co., Santa Clara, Calif.* Two new sizes of twin-helix "Pengo" earth augers bore 10" and 12" actual hole diameters. In addition to drilling ordinary ground, it is claimed that augers will bore holes in hardpan, permafrost and frozen ground, decomposed rock and some kinds of caliche and sandstone. Twin-helix design eliminates back thrust against side of hole. Each half helix is equipped with shank plate, each of which is provided with replaceable cutting points of abrasion-resistant alloy steel.

Saw—*Wright Power Saw & Tool Corp., 292 Longbrook Ave., Stratford, Conn.* Hand-held 14-lb. power saw operates from any 60 cu. ft. or larger air compressor. Saw drives twin reciprocating blades over 4" stroke at 1,500 strokes per minute. Tooth design makes saw equally effective for cross-cutting, ripping or notching. Sawdust is thrown away from operator and cannot clog or bind blades. Saw teeth can be re-sharpened and set as in handsaw. Handle is adjustable through 360°. Saw stops instantly when spring-loaded throttle is released.

Tractor-Shovel—*Frank G. Hough Co., 819 Seventh St., Libertyville, Ill.* Model HY "Payloader" has 1¼ cu. yd. bucket and is available with 60 h.p. gasoline or diesel power. Engine is at rear over drive wheels and operator is located where he has clear view in all directions. HY has automatic bucket tip-back, hydraulic power control of bucket-dump and bucket-close. It has full-reversing transmission giving 4 speeds in each direction, up to 29 m.p.h., and independent reverse control. Steering is power-boosted. Digging angle or bucket pitch is adjustable between 1° and 6°. Maximum dumping clearance is over 8'.

Material-Handling Pump — *Gray Co., Industrial Division, Graco Square, Minneapolis 13.* Air-operated "Mogul" pump is equipped with device called "Evenflo" which prevents spray gun spurting and assures even coating of surfaces. Pump operates in original 400-lb. and 100-lb. drums or in bucket-type containers and supplies material through hoses for spray gun, pole gun or extrusion gun application. Pump operates within air pressure range of 20 to 175 p.s.i. It weighs 35 lbs. Power head is cast aluminum, air motor incorporates steel forgings and machined castings and large poppet valves.





...day after day until the job is done!

DEPENDABLE MARLOW Self-Priming Centrifugal Pumps team up to keep the ditch dry on this pipe laying job through Canarsie, Brooklyn, N. Y.

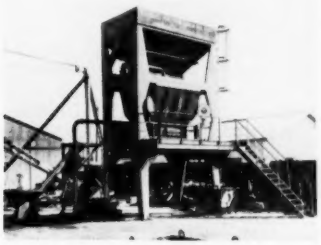
It takes a good pump to stand up to continuous pumping day in and day out. These pictures show TWO good pumps . . . BOTH Marlow Water Wizards . . . at work to keep this big job going smoothly. Trouble has no place here. A contractor wants dependability . . . the kind that keeps men and other equipment on the job and saves him money. That's the famous Marlow dependability.

Marlow makes the world's most complete line of construction pumps — and the largest size range. Self-Priming Centrifugals and Mud Hog Diaphragm Pumps. Write for Bulletin C48.

MARLOW PUMPS 536 GREENWOOD AVE. RIDGEWOOD, N. J.

MARLOW PUMPS — OFTEN CHALLENGED BUT NEVER SURPASSED.

Asphalt Paving Process—*National Amalga-Pave, Inc., 357 S. Robertson Blvd., Beverly Hills, Calif.* Cold-mix process consists of adding to powdered asphalt and mineral aggregates "B.G.S." liquid flux oil which displaces moisture from surface of aggregates and then amalgamates with powdered asphalt to produce binder for aggregates. Equipment for process is manufactured by Standard Steel Corp. and consists of special mixing unit with overhead storage bins, aggregate weigh hopper, flux oil weigh hopper and batch-type pugmill. Plant also has special unit for powdering asphalt just prior to its being added to mix. Standard is also manufacturing conversion unit to adapt hot-mix plant to cold process. Plant is available in capacities of 1,000, 2,000, 3,000, 4,000, 5,000 and 6,000 lbs. per batch.



3,000-lb. Amalga-Pave plant

Torque Converter Operation

A device to demonstrate the operation of the torque converter, which is a component part of many automatic transmissions used in construction and industrial equipment, has been developed for Detroit Diesel Engine Division by Ideal Models Co. of Detroit. The device is constructed of transparent and colored plastics and is a model of the torque converter used with G.M. Series 71 and Model 6-110 diesel engines.

The model is activated by a small crank which sets the "pump" section of the converter in action and the resulting flow of fluid which causes the transfer of power from the "pump" to the "turbine" is easily discernible.

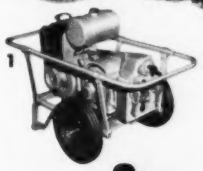
The model is available for inspection at G. M. Diesel distributors' and dealers' showrooms and is also available for use in engineering schools and colleges.

JACKSON SIDE-FORM VIBRATOR

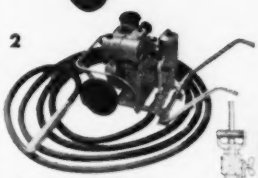
CUTS COSTS • SAVES LABOR • INSURES A BETTER JOB

Eliminates





1



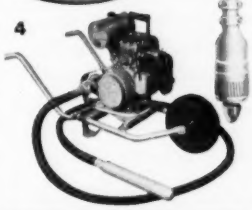
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3



6



4

MANUAL VIBRATING of concrete at side forms. Saves the better part of two men's labor. Mounts on any modern finisher, Jackson Vibratory Paving Tube or Spreader. Employs two or more vibratory units that are simultaneously lowered into or raised from the concrete by the finisher operator. Units operate close to forms or reinforcement without fouling — ride over any obstruction encountered. Will not penetrate into sub-base. Assures thorough compaction regardless of speed of finisher or spreader . . . no spots missed. Long-wearing, trouble-free.

JACKSON

IDEAL VIBRATORS FOR EVERY TYPE OF JOB

1. Power Plant used with Compactor and Screed, 1.25 KVA. Others of 2.5 and 5 KVA capacity — all produce both single and 3-phase 110 v. 60 cycle AC and have generators requiring no maintenance or adjustment. 2. Hydraulic vibrator with time-saving 50' reach. 3. Powerful, easy-to-handle electric vibrator — shafts up to 28'. 4. Finest of engine-driven flexible-shaft vibrators. 5. Revolutionary, fast, granular soil vibratory compactor. 6. Heavy-duty mass construction vibrator — a "must" on dams, etc. 7. Electric vibratory screed — most productive of all screeds for municipal paving, highway widening, etc. Write for "Pocket Guide" describing the entire line.

FOR RENT OR SALE AT JACKSON DISTRIBUTORS

ELECTRIC TAMPER & EQUIPMENT CO.
LUDINGTON MICHIGAN



5



7

THIS TRADE-MARK IS

RECOGNIZED AND RESPECTED



WHEREVER ENGINES ARE USED

Continental Red Seal power is speeding progress and cutting costs at practically every stage of construction work, from excavation right on through final grading. You find it in various specialized types of road-building and earth-moving equipment; in conveyors, hoists, industrial trucks and other materials handlers; in mixers, compressors, welders and standby generator sets, as well as in many of the vehicles which haul materials to the job.

There's always a reason for such preference as Red Seals have come to enjoy, and in the case of powered equipment, that reason is *performance*, of course. Red Seals run dependably, day in and day out, because each model is engineered expressly for one job. When you find a Red Seal in a given make of specialized machine, you may be sure that having been built with one application in mind, it will do its work superlatively well.

And when you *buy* equipment in any of the far-flung fields which Continental Motors serves, it will pay you to choose a make with Continental Red Seal engine. The Red Seal emblem commands respect wherever power is used.

GOOD EQUIPMENT IS BETTER WITH CONTINENTAL RED SEAL POWER

Continental Motors Corporation
MUSKEGON, MICHIGAN

NEW EQUIPMENT • MATERIALS

Concrete Cutter—*Felker Manufacturing Co., 1128 Border St., Torrance, Calif.* Model 250 "Di-Met" concrete cutter has increased power over earlier model. Original 10 h.p. engine has been replaced by 13.5 h.p. air-cooled, 2-cylinder, 4-cycle Wisconsin Model TF. Another improvement is hose connection permitting positive water feed to blade from external sources. Cutter uses diamond wheels from 8" to 18" in diameter and is equipped with blade guards of 2 sizes, 14" and 18", for use on double-ended spindle. Rear tires are now pneumatic, making machine self-trailing.

Power Saw—*DeWalt, Inc., Lancaster, Pa.* Model GR radial arm saw features recently perfected DeWalt low-dead rise, direct drive motor. Design of motor is such that there is reduction of distance from extreme bottom of motor casing to saw arbor, allowing feeding of thicker stock when using standard 14" saw blade. Motor is totally enclosed. Saw has double row sealed-for-life bearings in roller head assembly. Machine is available in standard and medium arm sizes. Motors available with Model GR range from 2 h.p. A.C./D.C. to 3 h.p. single-phase and from 3 to 5 h.p. polyphase.

Asphalt Coating Reinforcement—*The Flintkote Co., 30 Rockefeller Plaza, New York 20.* Processing of cotton fabric for coating reinforcement has been discontinued and "Glasfab" membrane is being distributed instead for use with Flintkote asphalt coatings in waterproofing, roofing maintenance, tank and pipe protection work. "Glasfab" is made with Fiberglas yarn, woven into mesh fabric and treated with asphalt. Features of mesh are high tensile strength, heat and rot resistance and immunity to dampness. It is offered in widths ranging from 2" to 36" and in rolls 50 yds. long.

Engine Filter—*Wisconsin Motor Corp., Milwaukee 46.* New oil filter cartridge has been developed by Wisconsin in collaboration with Wix Accessories Corp. for its V-type air-cooled engines. Called "Micro-Fine" oil filter cartridge, it is combination of virgin cotton and plastic-impregnated wood cellulose. Filter removes solids of micron size. It holds its own dry weight of acids, dirt and filings. Thread of cartridge is machined to fit oil filter base.

Plaster Aggregate—*Great Lakes Carbon Corp., Building Products Division, 18 E. 48th St., New York 17.* "Permalite" light-weight plaster aggregate is presented in new bulletin. Included is short form specification for use by architects in specifying plaster for general base coat plaster applications. Recommended mixes and applications, based on A.S.A. Specification A42.1, are given. Chart lists materials required for various plaster bases—gypsum lath, metal lath and masonry. Properties of "Permalite" plaster, such as strength, thermal conductivity, density, etc., are given. Use of "Permalite" plaster for fireproofing structural steel is covered. Typical jobs are illustrated.

Earth-Moving Equipment—*Caterpillar Tractor Co., Peoria 8, Ill.* Annual edition of *Caterpillar Products* (Form 30081) contains complete listing with pictures and brief specifications of all but 2 of current line of Caterpillar products. Listed are tractors, bulldozers, scrapers, graders, cable controls and engines. Not included are 2 recently announced diesel engines, D326 and D337. ¶ *The Endless Track* is title of new booklet (Form 30140) which tells story of Caterpillar track-type tractors, their origin, construction and performance, and recites advantages of Caterpillar dealer organization.

Electric Sets—Caterpillar booklet (Form 30059) presents design, operating and performance features of 4 largest diesel electric sets, D397, D386, D375 and D364 engines. Power ranges are outlined and information on adapting engines for various jobs is included. Features of construction, operation, cooling and lubrication are listed and brief fuel consumption specifications are included.

Scaffolding—*Wilson-Albrecht Co., 3549 Wooddale Ave., Minneapolis 16.* Catalog (Form PS-26) presents photos and descriptions of masons' jacks, chimney scaffolds, sectional scaffolding, carpenters' brackets, interior scaffold jacks and other equipment. ¶ *Steel Scaffolding for the Modern Constructor* is title of new booklet (Form PS-24) describing advantages and applications of various forms of steel scaffolding. Photos and descriptive information on sectional scaffolding and masons' jacks are included.

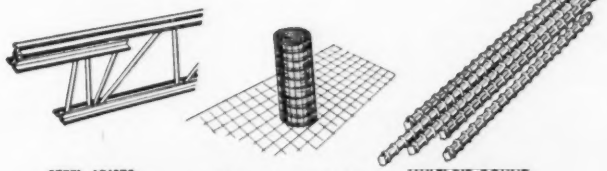
Earth-Moving Machines — *Euclid Road Machinery Co., Cleveland 17.* Two new booklets cover Cummins and General Motors powered Euclid equipment. They list by model number various diesel engines and equipment in which they are available. Specifications for Euclid rear-dump and bottom-dump hauling units, scrapers and loaders are included, as are lists of engine dealers and Euclid distributors in U. S. and Canada. Form EGM-1 covers General Motors and ECE-10 Cummins powered Euclids.

Aggregate Production—*Cummins Engine Co., Columbus, Ind.* Thirty-one illustrations of Cummins diesels producing crushed stone, aglime, sand and gravel are displayed in Bulletin 5314. Machines powered by Cummins engines are shown hauling, load-



THE SIGN OF QUALITY CONSTRUCTION

Carefully controlled from open hearth to finished product in the modern Laclede mills, these construction steels offer dependability of quality for your construction needs.



STEEL JOISTS
For strong . . . lightweight . . . economical construction. Spans to 40 feet.

WELDED WIRE FABRIC
Cold drawn, welded automatically . . . in rolls or sheets.

MULTI-RIB ROUND REINFORCING BARS
With Laclede improved design for maximum anchorage . . . and numbered to meet latest ASTM A305 Specifications.

Other Laclede quality construction steels: corrugated centering accessories • spirals • pipe and conduit.

LACLEDE
Products of Construction Steel

LACLEDE STEEL COMPANY
St. Louis, Mo.

ing, crushing and pulverizing, sand and gravel dredging and brief descriptions of jobs are given. Cummins diesels for hauling, loading and industrial power are pictured and specifications given.

Loading and Hauling Machinery—*Athey Products Corp., 5631 W. 65th St., Chicago 38.* Condensed pocket catalog, 1951 edition, presents complete line of Athey products, including loaders, breakers, trailers, wagons, wheels. Products are pictured, brief specifications given and applications explained. Spread of photos shows Athey equipment on war work.

Engines—*Worthington Pump and Machinery Corp., Harrison, N. J.* Bulletin S-500-B52A presents new line of DR diesel engines. It describes and pictures 4-cycle, direct-injection, totally enclosed engines with photos, cut-away line drawings and specifications. Also described are supercharged SOR engine, DRGO dual-fuel diesel and SDRGO supercharged dual-fuel diesel.

Weather Engineering—*Weathercasts of America, 611 Olive St., St. Louis 1.* Booklet, *Weather Engineering for Industry,* describes service offered by company in providing information to clients on future weather conditions as they will affect their operations. Case histories describing service to various industries, including construction, are included.

Bituminous Paving—*Wm. Bros Boiler & Mfg. Co., Minneapolis 14.* Leaflet presents new "Bituminizer" for distributing and spraying bituminous material. Features of tank, flue, pump, power unit, material handling system and cab control are described. Specifications are given. New "Spraymatic" bar is described in another folder. Sketches show operation of bar, detailed description is given of operation.

Concrete Pump—*Chain Belt Co., 1625 W. Bruce St., Milwaukee 4.* Revised bulletin is offered on "Rex Pumperete," a pump that pumps concrete through pipeline. Booklet describes Pumperete machine itself and method of pumping concrete through pipeline. It indicates on which types of jobs Pumperete will work to advantage, what types of mixes it will handle and height and distance requirements of placing job.

Laminated Lumber—*West Coast Lumbermen's Assn., 1410 S. W. Morrison St., Portland 5, Oreg. Standard Specifications for the Design and Fabrication of Structural Glued Laminated Lumber* is based on data developed during several years of research by Forest Products Laboratory of the Forest Service of the U. S. Department of Agriculture. Covered by specifications are lumber grades for individual laminations and design stresses.

Excavator-Crane—*Hyster Co., Portland 8, Oreg.* Catalog 1170 presents "Hystaway" showing operational photos of machine used both as utility and production tool on Caterpillar

BUILD with less steel...
save time and manpower, too

with LIGHTWEIGHT, insulating PERMALITE aggregates



Industrial buildings, schools, hospitals, defense housing, military buildings – all can be built with *less vital* steel. Lightweight Permalite in place of sand in concrete and plaster will reduce the dead-load of a building as much as 80%. Less steel is needed to support this lighter weight concrete and plaster.

Lightweight Permalite/concrete and plaster are easy to handle – quick to apply. With Permalite, rigid completion dates can be set and met!

Get the *full story* – learn how you can build with less steel and save time and manpower too. Mail coupon today.

NO END OF USES

CONCRETE: *Roofs and Floors*—over lightweight decking. *Exterior Walls* – thin, light; easily formed and erected.

Can be monolithically poured or precast into blocks, slabs and panels – can be sawed or nailed!

PLASTER: *Fireproofing*—speedily applied over structural steel. *Interior Walls* – replaces sand plaster – at less than half the weight.

see our CATALOG in SWEET'S FILE

Permalite
THE LEADING PERLITE AGGREGATE

A Building Product of
Great Lakes Carbon Corporation
and its exclusive Permalite Licensees

Great Lakes Carbon Corporation, Dep't. 154
18 East 48th Street, New York 17, N.Y.

Please send full story on Permalite lightweight construction.

NAME .....

ADDRESS .....

.....

track-type tractors. Mounting procedure, complete specifications and dimensional data are presented. Listed are optional equipment and attachments available, including "ESCO" track-walking shoes to permit tractor with Hystaway to operate on or off railroad tracks.

Grid Roller—Hyster offers Catalog 1175 on its grid roller for bituminous road salvage. Operation of roller, towed by Caterpillar motor grader or tractor, is described in 7-phase, step-by-step style. Details of drums, grids and weight are given.

Forming System—*Universal Form Clamp Co., 1236 N. Kostner Ave., Chicago 51.* Enlarged, illustrated catalog describes "Uni-Forms" and "Uni-Form" system of wall form construction and describes application of system to many types of concrete forming work.

Steering Booster—*Garrison Manufacturing Co., 1506 S. Santa Fe Ave., Los Angeles 21.* Hydraulic steering boosters for G.M.C. HC-850, HDC-900 and up truck models are described in new bulletin. Advantages of boosters on trucks when operating under adverse road conditions or carrying very heavy loads are described. Installation views are included.

Metal Lath Specifications—*Metal Lath Manufacturers Assn., 636 Engineers Bldg., Cleveland 14.* Metal lath specifications for metal lathing and furring, 1950 revision, include complete specifications covering solid, hollow and sound-insulating partitions and all types of ceiling construction such as contact, furred and suspended with wood, steel and concrete construction.

Safe Highways Booklet

A safety booklet designed to focus public attention on the need for better roads has been published by Caterpillar Tractor Co. More than 300,000 copies are being distributed in an effort to publicize the theme that better roads mean safer roads. The booklet is a compilation of advertisements that appeared in *Saturday Evening Post, Time* and *Newsweek* during 1949 and 1950. Title of the booklet is "Stop Murder," taken from the first two words of the lead advertisement which is entitled, "Stop Murder at the Crossroads."

Are You "Overworking" on Subdrainage Jobs?

Many contractors have found they can save time, trouble and money on subdrainage jobs by using Armco Perforated Pipe. It means they can bid lower, yet retain good profit.

One reason is that Armco Pipe is easy to install. Long, 20-foot lengths are light in weight—easy to haul and handle. Fewer joints are needed and these are quickly made with simple bolted couplers. A small unskilled crew does the job without special tools. Breakage is no problem.

Try profitable "low-level" bidding with Armco Perforated Pipe for that next subdrainage job on highways, railways, airports or elsewhere. Write for data. Armco Drainage & Metal Products, Inc., 2851 Curtis St., Middletown, Ohio. Subsidiary of Armco Steel Corporation.

ARMCO PERFORATED PIPE

ARMCO



ALL-WAYS Practical, Versatile, Economical



"KING" Combination Nipple

Outstanding in its advantages over regular iron pipe nipples for connecting all types of hose. Made of non-porous tubular steel, with clean threads and deep, carefully finished corrugations.

Stocked by Manufacturers and Jobbers of Mechanical Rubber Goods.

DIXON
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Main Office and Factory: PHILADELPHIA 22, PA.
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MANUFACTURERS' NOTES

John E. Carroll, general sales manager of AMERICAN HOIST AND DERRICK Co., has been elected vice president of sales. R. J. Stoddard, chief engineer, has been named vice president of engineering. James F. Bishop, secretary-treasurer, has been elected to the board of directors.

M. B. Garber, director of sales for THE THEW SHOVEL Co., has been sworn in for services as on-call consultant to the Machinery Division of the National Production Authority. He will continue his duties at Thew, but will be available to NPA as adviser on matters pertaining to requirement, use and production of construction machinery. Mr. Garber was director of the Construction Machinery Division of WPB during World War II.

MACK MANUFACTURING CORP. and WOOLDRIDGE MANUFACTURING Co. have signed an agreement under which Wooldridge will partially produce and fully assemble Mack off-highway vehicles in their main plant at Sunnyvale, Calif. Wooldridge will also act as exclusive distributor for Mack's off-highway equipment in 10 western states.

W. A. Roberts has been elected president of ALLIS-CHALMERS MFG. Co., succeeding the late Walter Geist. Mr. Roberts has been executive vice president in charge of the tractor division since 1947. He has been with Allis-Chalmers since 1924. W. C. Johnson, executive vice president in charge of the general machinery division, has been named executive vice president for the entire company. R. S. Stevenson, general sales manager of the tractor division, has been named vice president in charge of the tractor division.

Frederick W. Thomas has been appointed director of purchases of JOY MANUFACTURING Co. and George R. Fox, formerly head of purchasing, has been named assistant vice president in charge of the company's plant expansion program.

JOSEPH T. RYERSON & SON, INC., announces an expansion program at their St. Louis plant which includes reconstruction and new layout of their present plant and construction of additional warehouse space totaling approximately 50,000 square feet.

The halfway point on a million-dollar expansion program has been reached by the L. B. FOSTER Co., B. L. Foster, vice president, announces. Completely new warehousing facilities have been finished at the Chicago plant, considerable progress has been made in expanded warehousing facilities in Houston, modernization work is now in preliminary stages at Carnegie, Pa., where an extensive addition to the company's main office building has been completed. New work will be undertaken this year at warehouses in Delawanna, N. J. and Amsterdam, N. Y.

STERLING MACHINERY CORP. announces that ESSICK MANUFACTURING Co. of Los Angeles has acquired all of the outstanding stock of the company, which will be operated as a wholly owned subsidiary. No change in Sterling company policy or distribution is contemplated, Bryant Essick, president of Essick Manufacturing Co., states.

E. J. Seifert, president of PETTIBONE MULLIKEN CORP., announces his company's purchase of the ROME GRADER DIVISION of Union Fork and Hoe Co. of Rome, N. Y. For the time being, according to Mr. Seifert, the Rome plant will continue to manufacture the four sizes of Rome graders. The Chicago plant of Pettibone Mulliken will begin at once to manufacture, distribute and service all sizes.

Herbert E. Smith has been elected a director of UNITED STATES STEEL CORP. and a member of its finance committee, succeeding the late Robert C. Stanley. Mr. Smith is chairman of the board and chief executive officer of UNITED STATES RUBBER Co.

Paul T. Evans, manager of Pittsburgh district sales for ATLAS POWDER Co.'s Explosives Department, has been appointed assistant to the director of sales.

Eli Schnapper has been appointed manager of sales coordination of the Building Products Division of L. SONNEBORN SONS, INC.

Obituary

R. G. Milton, assistant advertising manager of Austin-Western Company, died February 8.

Manufacturers' addresses are listed on page 127

Aggregate (Light-weight)
Great Lakes Carbon Corp., Building Products Division

Air-Entraining Agents
A. C. Horn Co.

Asphalt Plants (Portable)
Barber-Greene Co.
Iowa Mfg. Co.
Standard Steel Works
White Mfg. Co.

Asphalt Tile
Coleman Floor Co.

Axles (Truck)
Eaton Mfg. Co., Axle Division

Backfillers
Bucyrus-Erie Co.
Cleveland Trencher Co.
Harnischfeger Corp.
Parsons Co.

Batchers
Blaw-Knox Division
Butler Bin Co.
Construction Machinery Co.
Heltzel Steel Form & Iron Co.
C. S. Johnson Co.

Bearings (Anti-Friction, Tapered Roller)
Timken Roller Bearing Co.

Bins
Blaw-Knox Division
Butler Bin Co.
Heltzel Steel Form & Iron Co.
Iowa Mfg. Co.
Irvington Form & Tank Corp.
C. S. Johnson Co.
Universal Engineering Corp.

Bits (Detachable Drill)
Ingersoll-Rand Co.
Timken Roller Bearing Co.

Blades (Grader, Maintainer, Snow Plow, Bulldozer, Scarifier)
Shunk Manufacturing Co.

Bridges
Armco Drainage & Metal Products

Buckets (Clamshell & Dragline)
Blaw-Knox Division
Bucyrus-Erie Co.
Harnishchfeger Corp.
C. S. Johnson Co.
Owen Bucket Co.
Wellman Engineering Co.

Buckets (Concrete)
Blaw-Knox Division
Construction Machinery Co.
Heltzel Steel Form & Iron Co.
Jaeger Machine Co.
Owen Bucket Co.

Building Papers
Sisalkraft Co.

Buildings (Steel)
Allied Structural Steel Cos.
Armco Drainage & Metal Products
International Steel Co.
Macomber, Inc.

Buildings (Steel)—Continued
Smooth Ceilings System
Truscon Steel Co.

Bulldozers
Bucyrus-Erie Co.
R. G. LeTourneau, Inc.

Car Pullers
Clyde Iron Works

Carpet
Coleman Floor Co.

Ceilings
Fenestra Building Products
Smooth Ceilings System

Cement (Common and Special)
Halliburton Portland Cement Co.
Lehigh Portland Cement Co.
Lone Star Cement Corp.
Universal Atlas Cement Co.

Cement (White)
Trinity White, General Portland Cement Co.
Universal Atlas Cement Co.

Clamps (Hose)
Dixon Valve & Coupling Co.

Compressors
Allis-Chalmers Co.
Ingersoll-Rand Co.
Jaeger Machine Co.

Concrete Curing Material
A. C. Horn Co.
Sisalkraft Co.

Concrete Mixers, Pavers, Tampers
Chain Belt Co.
Construction Machinery Co.
Foote Co.
Jaeger Machine Co.
Knickerbocker Co.
Koehring Co.
Kwik-Mix Co.
T. L. Smith Co.
Worthington Pump & Machinery Corp.

Concrete Vibrators
Electric Tamper & Equipment Co.
Ingersoll-Rand Co.
Vibro-Plus Products, Inc.
White Mfg. Co.

Conveying Machinery
Barber-Greene Co.
Chain Belt Co.
Iowa Mfg. Co.
Link-Belt Co.
Universal Engineering Corp.

Cranes
Austin-Western Co.
Bucyrus-Erie Co.
Cleveland Trencher Co.
Clyde Iron Works
Harnischfeger Corp.
Koehring Co.
R. G. LeTourneau, Inc.
Link-Belt Speeder Corp.

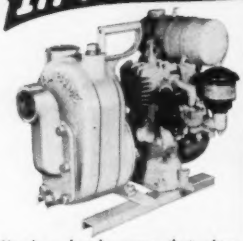
F&D has specialized for more than half a century in meeting the bonding requirements of contractors and makes its unrivalled facilities readily available to them through its experienced representatives in all parts of the country.

FIDELITY and DEPOSIT
COMPANY OF MARYLAND

Founded 1890—Baltimore, Md.

AFFILIATE: AMERICAN BONDING COMPANY OF BALTIMORE

Proved In The Field



Dual Prime Centrifugal PUMPS

Here's a handy pump that gives long, faithful service at **lowest cost.** This CMC DUAL PRIME Model 3M gives you the **big** advantages of exclusive CMC dual jet construction and advanced centrifugal design. Pumps up to 3000 gallons per hour. Open thrash type impeller handles solids up to ⅜".

Write today for latest catalog. CMC DUAL PRIME models are available in sizes from 1½" to 10" — capacity from 3000 to 200,000 gallons per hour.

- **Unmatched Self-Priming Speed.**
- **Suction Lifts of at Least 25'**
- **Operates Successfully when Ordinary Pumps Lose Prime and Become Air-Bound.**
- **Tested Under Most Severe Conditions.**

CONSTRUCTION MACHINERY CO'S.
WATERLOO IOWA, U.S.A.

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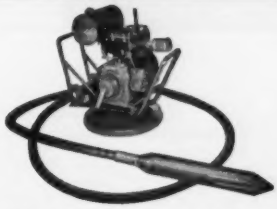
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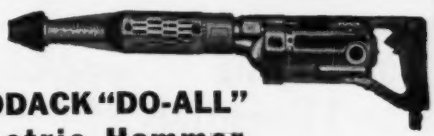
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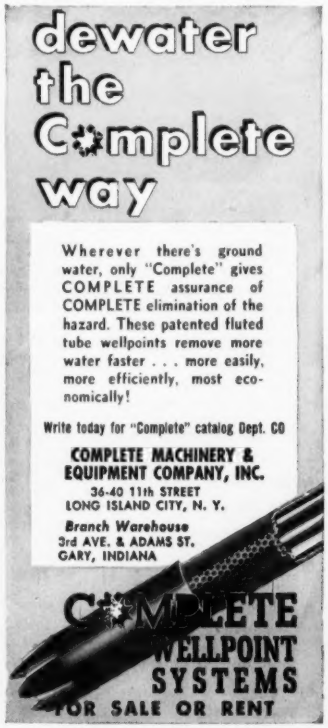
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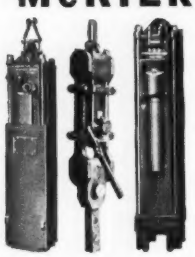
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